The Journal of the
American Medical Association

VOL. XVII. CHICAGO, OCTOBER 31, 1891. No. 18.

ADDRESSES.

THE WORK OF MEDICINE FOR THE WEAL OF THE WORLD.

BY H. C. HUGHES, M.D.,
OF ST. LOUIS, MO.

President's Address before the Seventeenth Annual Session of the Mississippi Valley Medical Association.

MEDICAL PROGRESS.

It is gratifying to the humanitarian student of scientific medicine to note the amazing progress lately made in knowledge of the human organism and in resources for its regulated control in health and disease.

Since Democritus, in that classical garden at Abdera, made one of the earliest dissections, to learn thereby, if possible, the morbid nature of melancholia, such strides toward a knowledge of the nervous system and its diseases and their treatment have been made as would have impressed the physicians of antiquity with the belief that their modern brethren were sorcerers and charmed men bearing charmed lives. Much of this has taken place within the past three decades, for when I entered the profession but little compared to now was known of the wonderful mechanism and normal function of the nervous system and its not less astonishing morbid manifestations, as we study and treat them today. True, the astonishing anatomical discoveries of Sir Charles Bell and of Claude Bernard into the intricate function of the nervous system, which with the amplifications of Solly, Abercombie and other anatomists of the brain and spinal cord, and the contributions of our own Brown-Séquard, then an American and the pioneer neurologist of our country and foremost in the world, had already attracted the attention of neurological *savants;* but not an American or European school had then a chair of Neurology or Psychiatry, though Rush had, nearly half a century before, clinically described some mental diseases in the Pennsylvania hospital in advance of all the world across the sea; and his descriptions have been lately verified, approved and re-affirmed at home and abroad as evidence of our present advance in Neurology.

Notwithstanding the great discovery of Sir Charles Bell respecting the spinal nerves had long before been announced to the world, the diseases of the sympathetic nervous system were then scarcely known, and are only now beginning to be generally recognized and studied. True, the great works of Rokitanski, and Kolliker, and Trousseau, were before the world, the great, the venerable Virchow was fast winning converts to his cellular pathology, the fame of Charcot as a great clinician was rapidly spreading, and Romberg had written a work on nervous diseases destined to endure; but neurology, as a special department of medical study, was not then much considered by the profession at large, though Charcot and his European *confréres* had begun to bring it into the special prominence it has since acquired. Graves and Marshall Hall, Solly and Abercrombie, Stokes and Skoda, had made their everlasting impress on the profession. The treatment of fevers had been placed on a rational basis, and the science of physical thoracic exploration and descriptive anatomy were almost as perfect then as they are now.

Velpeau, Civiale, La Rue and Nélaton, Mott, Mussey, Mütter, Stone, McDowell and Pope, with the rising Brainard of Chicago, and the surgeons of Great Britian and Germany, had made, or were making, the surgery of the middle third of the nineteenth century lustrous and renowned. The work of Corvisart had become common property; the cell doctrine was being taught; ether and chloroform were in use; and Bastian and his colleagues were vigorously and with plausibility contending for spontaneous generation against the old, but now re-affirmed and firmly established maxim: "*Omni vivum ex ovo.*"

The classical and revolutionary psychiatry and psycho physiology of Maudsly, the psychology of Herbert Spencer, and the discoveries of Ferrier, had been only dimly foreshadowed in the theoretical misconceptions of Gall and Spurzheim, and in the discovery of Broca's speech center in the third left frontal convolution of the cerebrum. Aphasia was then only known as the alalia of Lordat—an indifferent condition of the brain affecting speech without involving the intellect, and the great contest between Broca and Aubertin

before the Anthropological Society of Paris, that determined the beginning of cerebral localization as a fact of physiological science, had ended in Broca's surrender and later triumph. It is true that Pinel had already broken the shackles of the fettered lunatics of Bicetre, while Chiarugi had done the same for the chain-bound and imprisoned insane of Italy. The elder and younger Tuke, of England, were practicing and proclaiming humanity to these unfortunates in the pioneer land of the Magna Charta and habeas corpus; and Combe had said and proved that insanity was a disease and not a satanic possession, nor a proof of the anger of the gods; yet, in the profession at large, comparatively little was understood of insanity, or nervous diseases in particular. At that time, to be afflicted with many now well-known diseases of the nervous system, was to be dismissed by the physician, without attempt at treatment, as only nervous; and the unfortunate subject of hysteria, often regarded as a she-devil, who might do better if she would, because a dash of cold water in the face or down the spine brought back to its unfortunate victim the latent, abdicated, or dormant, volitional control of the higher over the lower rebellious and riotous nerve centers, got but little sympathy. Epilepsia, too, was still in the minds of some physicians, and more laymen, the Morbus Sacer which no mortal could control; while chorea still retained the name of the patron Saint Vitus, who was supposed to have had the power to stop the grimaces and jerky movements and sometimes diabolical dance, of this psycho-motor and motor center disturbance.

Brown-Séquard, and that Manchester physician, whose name I cannot now recall, who preceded him in the use of the bromides, have helped us to dispel many a theological delusion through therapeutic resources.

How unfortunate that the profession had not possessed them and the knowledge we have of their therapeutic power in the time of Cotton Mather, and of the convulsionaries of the middle ages.

It was before our day that Bayle and Calmiel described the general paralysis of the insane, and Prichard that of moral insanity; but only in your day and mine that they have come to be recognized as distinct morbid conditions of mind, though now often differently designated as paresis, paretic dementia, dementia paralytica, affective insanity, paranoia, etc.

In our day, imperative conception, morbid impulses, the *folie de toucher*, and the *folie du dout*, of the French, or the mysophobia of Hammond, and the numerous pathophobias of Beard, are studied as conditions requiring medical aid; and insomnia, as the symptomatic portentious expression of a functional or grave cerebral disease, and constipation in certain persistent forms, as a nervous disease, are just now being studied and treated in a more judicious manner than even ten years ago. The judicious physician no longer contents himself, or satisfies his patient, with only a hypnotic in the one instant, or a cathartic to empty the sewer which soon fills again, in the other. These are but temporary expedients. Any druggist, especially if he be rash enough (and many of them have no lack of that therapeutic confidence which is always present where knowledge is least) can do this.

These patients require, in addition to temporary relief, rested and restored brains, and a reinvigorated sympathetic nervous system, especially in that of one or other of their great splanchnic cavities.

Neurasthenia, or, as I have called it, general functional neuratrophia, has come to light in my time. Doctor Van Deusen, of Kalamazoo, Michigan, and Beard, of New York, who were the first of all modern observers to describe it, were personally known to me, the latter at the time his first paper was published on the subject, and oh! what a world of woe has been saved to man and woman by the discovery—especially to woman! To be weak, exhausted, and unstable in one's nervous system is to be miserable; but to be thus miserable and unappreciated by both layman and physician, as these persons were before it was known that people might be exhausted in their nervous systems without an appreciable local disease, was pitiable in the extreme.

The doctor, searching for a *locus morbi*, and finding none in the heart or lungs, liver or other of the viscera, and none in the brain or cord, or at least nothing deemed adequate to the general nervous weakness, and, perchance, finding in poor woman some slight local displacement or catarrh, or, perhaps, even an ulceration, or some ovarian tenderness, a part of the general hyperæsthesia, or an ovarian congestion that was but part of the lowered vasomotor tone which allowed of arteriole failure of control and vascular fullness there, as elsewhere, in the organism, too often too hastily saddled all the blame on the disordered but unoffending organ, "more sinned against than sinning;" and attacked with knife, cautery, or mechanical scaffoldings, the local part for the physiological fault of the whole. The violence done to confiding woman in the name of surgical therapy, the needless mutilation of her special anatomy in the name of surgical gynecology, are not yet fully appreciated; but, thanks to the spreading light of neurological truth, the clitoridectomies of the past, the oöphorectomies and hysterectomies of the present, except chiefly for real local surgical cause, are likely soon to be relegated to the surgery of the more barbaric past; and normal ovariotomy for distant neuropathic perversion will no longer be a recognized surgical procedure. Enlightened gynecology, en-

lightened surgery and neurology are now agreed to this.

Knowledge broadens with enlarging surgical skill. To be only a good cutter is not now regarded as necessarily the best of surgical counsellors, and in the practice of surgery caution and conservatism have come to be regarded in the profession as the proper accompaniments of boldness and skill with the knife. Surgery learns caution and conservatism from widened experience, just as therapeutics has learned that the hypodermic syringe is a dangerous implement when unwisely handled, or just as obstetrics has learned that the forceps may be too handy and applied too often. On the latter subject the *Centralblatt für Nervenheilk* reports the investigations of Winkler and Wallen to the end that the forceps in delivery was a more frequent cause of idiocy than was commonly supposed. In a *post mortem* examination of an idiot sixty years of age, who had been delivered with forceps, a depression of both parietal bones, corresponding to cerebral lesions, was found. Out of ten subsequent autopsies of idiots one similar condition was found to exist, and out of twenty-five living idiots six were found to have depression of the skull.

Medical progress within the last few years has been especially gratifying, aside from having exceeded that of many years before in the many therapeutic diseoveries already mentioned, most of which have been made within the past five or six years, such as the coal tar analgesias, hypnotics and Liebrech's cantharadinate of potash.

We have the discovery of Morvan's disease within the past eight years, the elucidation of syringomyelia and recently the approximative identification of the two as probably Morvan's and Maries' varieties of the same disease, the discovery and differentiation of neuritides from the ataxias and clearer descriptions of paranoia. The first account of that singular trophoneurosis of the bony system, acromegalia, discovered by Marie, was made in 1866, and Salemi Pace has cleared up the subject of astasia and abasia, under the title of "Partial Spinal Amnesia," so late as 1888.

But it would weary you to give a full detail of progress, even in the department of neurological medicine, made within the past year.

Let me just epitomize a little further some of the remaining most important advances, only to index them in your minds. To the reflexes have been added the virile, or bulbo-cavernous, the anal and oral, for diagnostic purposes.

To Bright's disease insanity has been added as a symptom, though this was known before. The psycho-pathology of the genesic sense, and its aberrations, has been especially elucidated since the name of "Jack the Ripper," of Whitechapel notoriety, came before the public. The opium psychosis, likewise alcoholism and dipsomania, have been much elucidated the past year. Additional cases of that curious phenomenon, *Seelinolindheit*, or soul blindness, have been recorded, and Monk has extended the visual area of the cerebral cortex. The relation of the blood to insanity has been more satisfactorily studied, and a marked deficiency in hæmoglobin has been found among the insane. This recalls the once despised assertion of Rush, that insanity is a disease of the blood-vessels.

Buckhard has attempted the treatment of hallucinations by cutting into the ideogenic area of the brain, and in one case claims to have actually succeeded, but he will probably find few followers. Luys has elucidated the subject of chronic hallucinations, finding coarse morphological change in the paracentral lobule perceptible to the naked eye. Alcoholic neuritis, as well as other forms of polyneuritis already alluded to, has been markedly cleared up during the past year. The microbe of tetanus has been confirmed, and Ferrier's cerebral localization, in the main, still stands the test of critical, clinical and pathological experience.

In psychotherapy, the tranquilizing power of galvanic cephalic electrization, as a promoter of sleep, has been confirmed and admitted. Codia in the opium habit, and as a substitute for opium in the management of the hyperæsthesic neuropathies, sulphonal, amyline-hydrate, chloralamide, hypnol, hyoscine, phenacetine, exalgine, antipyrin, and a long list of new hypnotics, have come into practical use, while chemical synthesis signalizes one of the greatest triumphs in its history in the production of an artificial quinine, absolutely identical with the product of the cinchona tree, from a Brazilian shrub (*remijia pedunculata*), treated with iodine and chloride of mythyl (thanks to MM. Grimand and Armand), while experimental physiology has proven that tolerance of and resistance to the zymotic diseases, and marked immunity from them in many instances, may be secured by protective inoculations, out of which, also, have grown Listerism and the safe, grand and painless surgery of our day—a surgery of half a century's growth, to which all the surgery of all the past in the world's history does not compare.

Congenital myotonia, as a disease of muscle, due to a persistence of or reversion to the embryonic type of muscular tissue, has been proven this year by Deliege. The pathology of athetosis has been shown by the younger Hammond, and Hachin demonstrates anew the neurotic theory of cholera. New proofs of the influence of the nervous system upon abnormal pigmentation are being constantly brought forward, and dermatology is paying large tribute to dermo-neurology in other directions, notably the eczemas.

These notes of progress show that medicine is

not standing still, but keeping up with the procession, and what is being done in my special department, is going on all along the line. What an inspiring record of discovery have we now, and what a prophecy for the future! If it be the proudest possible boast of a man to-day to be a physician abreast of the present advance in medicine, what may it be in the generation that shall come after us? What would Hippocrates think, could he now see what great results have flown from that early and faulty dissection of his friend Democritus, to which I have alluded? and what an amazing advance has been made since Vesalius, braving the superstition of his times, and even impending death for his temerity, dared to make the first human dissection. Though the atrabilis for which Democritus sought was but a myth of the imagination, from attempts like that of Democritus, grew Galen's proof that the arteries contained blood and not air, Harvey's and Jenner's great discoveries of the circulation and vaccinia and Claude Bernard's demonstrations of vaso-motor arteriole control, and Sir Charles Bell's discoveries in connection with the great sympathetic nerve.

The age that has so perfected the implements of war as to make peace profitable to all the world, that has given us the sewing machine, the telephone, the phonograph, the graphophone, the electric car for surface and aerial travel, sending man around the world in an incredibly short space of time, and sending audible messages with lightning speed of his journeyings back to his home, has given us resources in medicine and surgery equally astounding—discoveries and resources in biology, and in physiological and chemical therapy, so surprisingly grand and useful, that skepticism is silent, and criticism has become optimistic of nearly every professed novel resource of legitimate science. The favorable reception, for example, of Koch's recent incomplete discovery, is in marked contrast with the early rejection, by the profession, of the discovery of Jenner, for on the discoverer of vaccinia was bestowed, in the earlier days, aversion and contumely almost equal to the threatened anathemas of the Church upon the devoted head of Galileo.

Science is now having its innings. The patient labor of her two or three past decades is bearing fruit in medical channels for the welfare of mankind, far beyond the fondest hopes or the most exaggerated expectations of the past. The miracles of modern medicine are simply marvelous beyond all past conception of possibility. The wondrous, but unwise and unstable and morbid results of modern hypnotism, as commonly practiced, are not at all comparable to the real and permanent and safe results of modern scientific therapy—medical and surgical, and the latter are in marked contrast with the fatal mischief of the modern mind-cure craze. Yet, in hypnotism and the faith-cures of the day, medical science discerns the influence of the psychical over the physical, and judiciously employs it. It understands and correctly interprets, though at variance with that of the ages that are gone, the significance of the royal or sacred touch—the miraculous power of priest, potentate or healing fountain. This interpretation is found in the demonstration of Salpétrière, La Charitie, and the modern miracles of Nancy. Bernheim, Charcot, Paul Richet, Luys and Braid, who preceded them, have given the explanation.

The marvelous results of modern psychotherapy scarcely exceed the effects which follow judiciously applied electrotherapy, to say nothing of anæsthesia, and the modern resources of the later materia medica proper, in systemic and local disease. The power to control symptoms fills the mind of the modern physician with amazement and his heart with thankfulness, as he compares it with the comparatively meagre resources of the past. Pain in disease is practically under his perfect control; insomnia, no matter how grave the morbid condition with which it may be allied, is no more, while the manifestations of febrile action may, whenever desired, be entirely subdued, the problem being only when to stop it. Modern therapy is to the modern physician, in regard to aberrant function, almost what the throttle valve is to the engineer of our day. Now pain and heat, sensibility, and the heart's and the mind's morbid impulses, are controlled and regulated at the will of the physician; the cerebral, gastric, intestinal, renal and hepatic functions obey him, if he be fully as skilled as he may be, with all the resources of his art at full command—not with unerring certainty as yet, but with a degree of promptness and accuracy never before attained by our science and art. Truly, we live in an era of wondrous and most gratifying resources in medicine, and the triumphs of the present and recent past give us buoyant hope of even greater victories over disease in the near future.

If I have appeared to dwell too much upon neurological progress it is partly due to the fact that advance has been especially great in this department of medical research, partly to the fact that being the first neurologist who has ever been elected to preside over this body, it is probably expected that I should discuss medical progress from my especial stand-point, but my chief reason for so doing is the great and greatly appreciated influence of the nervous system and neurotherapeutic agents in the causation, phenomena and treatment of disease, so great that neural pathology has now a place almost paramount in medical thought, so that the clear view of Cullen that all diseased manifestation is largely nervous, is being confirmed by discov-

eries of our day, and the advances of the century since the great nosologist wrote, tend to confirm his now famous dictum: "*Quantem ego video motus morbosi fere omnes motibus in systemate nervorum ita pendant ut morbi fere omnes quodammodo Nervosi dici queant,*" words I love to quote, though uttered over a century ago, because every year of medical observation since they were written has proved their truth. But in every department of medical investigations we are in the midst of wondrous scientific surprises. The orchitic fluid of the great French physiological *savant;* the remarkable inoculations of his colleague, Pasteur; the researches of the great Berlin bacteriologist, Koch, whatever we may think of his tuberculin, have only been transcended by the wondrous laparotomies of Lawson Tait, inaugurated by our own immortal Ephraim McDowell, the brilliant craniotomies of Victor Horsley, the abdominal sections of Nicholas Senn, the surgical antiseptic triumphs of Lister and their colleagues. The cranial topography mapped out by Ferrier and previously pointed to by Hitzig and Fritsch have opened up the old *terra incognito* of cerebral physiology and pathology to the advance of the neurotherapeutist and neurophysiologist, and we are infinitely blessed in the present age over our ancesters in the manifold resources of insight and of relief afforded by our art in desperate extremes of despairing suffering.

SPECIALISTS AND SPECIALISM.

The recognition of special work in the vast field of practical medical therapeutics has passed beyond the control of the old fogy element who delight in decrying specialism, and while there is great danger of specialism becoming "priggish" and hobbyish, this danger can be averted by cordial recognition and fraternal relation of specialism with general medicine. The true specialist should be largely a consultant to the general profession and mainly indebted to it for his practice.

Specialists need only become markedly distinct in the public eye through the profession at large neglecting to give timely and proper recognition and to amalgate them with the mass in Medicine that makes up the grand salvation army of the race, physically and mentally speaking. We are approaching a day, too, when the territory of the specialist in Medicine will become common ground. The early coming auspicious day should be hailed by all true physicians. Specialism is simply the advance picket guard which explores the ground ahead and ascertains if it be proper ground for occupancy by the grand army of Medicine, and sooner or later, the whole will take up its line of march and go forward to possess it.

MORAL AND SOCIAL RELATIONS.

Physicians, as a class, are honest men. Professional pride is founded largely in candid dealings with patients. The welfare of the patient is the first law with us, and no body of men has ever had so plain a moral plank in its platform of principles as ours. The precept of the golden rule has gleamed through the conduct of the profession in all ages. It was introduced practically in the Hippocratic oath and to-day no body of men stand before the world in a more disinterested or more honest light than does the medical profession. We hold the profoundest secrets of the family with the sanctity of the professional and few of us are ever charged with filching from our patients for considerations of benefit without reasonable hope of benefiting them.

We are often charged with incompetency, but seldom with dishonesty—never justly the latter, for medicine, whatever her faults of head, has none of heart towards mankind. She is the peer of all professions, the ministry of the Gospel of the immaculate Immanuel not excepted.

The incompetency of regular medicine is the incompetency of human imperfection only—the incompetency of the times in which we live, not the lack of endeavor. Notwithstanding we live in an age that has given us the electric light, we still see some things as through a glass darkly, but it is safe to say that our profession partakes as much of the general illumination of the present age as any other of the practical arts and sciences. We have utilized the electric light in exploring the obscurest recesses of the body and the lightning in treating its diseases. We are chasing the bacilli to their lairs and seeking to solve their pathological or physiological and hygienic significance.

HOW MEDICINE HAS HELPED MANKIND.

Medicine benefits mankind in a thousand ways not appreciated without the profession, even as "the light shineth in the darkness, though the darkness comprehendeth it not."

The pestilence that once walked in darkness and the destruction that once wasted at noonday, now destroy no more, because the hand of a Jenner, a Pasteur, or a Koch has said to destroying disease, as was said by a Mightier one of old to the engulphing sea, "thus far and no farther." The destructive force of devastating nature becomes impotent of harm, and the fears of threatened and trembling humanity are allayed. Few of the thousands of human beings rescued from former peril of small-pox ever think of the inestimable service rendered them by Jenner and vaccinia, as the thousands yet to be saved from terrible death, "in consumption's ghastly form," or in cholera's fatal collapse, will in the years to come give not much thought to the mysterious salvation of Liebrecht and his cantharadizin or the inestimable researches of Koch; nor will it

think of the millions of deaths saved through other bacteriological researches and the numberless hygienic, health-saving, death-resisting discoveries freely given to the world by the medical profession of the nineteenth century. How little does the world at large think, in its wild chasing after folly as it flies, after wealth and fame, honor and glory, which so elude the pursuer and throw him into the hands of the physician, of the restless and myriad-peopled world about it, which has been conquered to health since the memorable, original bacteriological discovery of Leuenbroeck, about two centuries ago, so that man now lives where he formerly died, through applied science and the labors of the medical profession. And while the conflict goes on, the physician stands sentinel for mankind, fighting his battles for him against the destroyer of his peace and the things that threaten his health and life. Yet how little does the rescued world now think of its obligations to the medical profession for its escape from the fatal dangers of malaria, and the horible ravages of small-pox, cholera, etc. The world has almost forgotten how deadly the Pontine marshes were in the time of the Cæsars, and how comparatively safe they are now through the advances of hygienic, prophylactic, and therapeutic science.

The medical profession is humanity's earthly human providence. It watches over man, unappreciated and unthanked, often, in his hours of wakefulness and while he sleeps, from his cradle to his grave, and wards off threatened dangers unseen by others, and as in regard to that supreme Providence who rules over all, man often gives the doctor and his vigilant work for his welfare a thought only in his last hours when he is too feeble to think of anything else and, alas, sometimes when it is too late for his physical, as it may be for his spiritual, salvation. Glorious profession! practiced in the life of Christ and His loving disciple, Luke, the good physician.

NON-POLITICAL INTERFERENCE WITH PUBLIC MEDICAL CHARITIES.

Thr medical profession champions the cause of the weak and the afflicted. It is fitting, therefore, that I should close this address with a word for the world's helpless wards who cannot speak for themselves.

To the victors may belong the spoils of political conflict, but where the spoils are human victims, minds dethroned and sacrificed to medical incompetency and party policy, we who are the professional descendants of those who brought these unfortunates out of the cruel bondage and neglect of a past inhumanity and superstition towards them, should secure for them the proper medical, as well as custodial care, which their disease demands in lieu of their broken chains and filthy, nelected dungeons.

Many of them, even in our almshouse and county asylums, have fallen from high mental estates, even higher places than those held by some who hold in the hollow of their hands their destinies, and their pitiable helplessness mutely pleads with our consciences to extend them sympathy and aid. We should endeavor to so influence public opinion and to so use our ballots, that parties and politicians so politic and inhuman as to sacrifice the mentally and physically maimed, or ill, in public hospitals and other of our eleemosynary institutions whom it is our special duty, under Providence, to guard, shall know the profession's indignation and feel its power.

The ordinary physician requires several years of training in these institutions added to his general professional knowledge and experience, to fit him for the proper understanding and care of the insane. To turn him out at this time, as is often done, and put in a novice, is not only a wrong to him who has given up his private business, expecting a permanent municipal position, but it is a crime against humanity against which science, experience and every instinct of human charity protests.

It would not damage the interests of parties to apply rules of Civil Service reform and fly the non-combatant flag over our State and city hospitals, especially for the insane, remembering that the mentally maimed who have fallen in life's conflict, are entitled to something more than to be tenderly carried from the field on a stretcher to a place of shelter. They should have their wounds skillfully treated and they should be restored, if possible, again to duty. This, a sense of duty and every consideration of sound public policy, prompts us to so do and to demand.

THE DOCTOR IN POLITICS.

One other subject, briefly, and I close. The doctor has too long held aloof from affairs of State. Result—our greatest names in medical history ignored if not forgotten; our highest interests and those of the people neglected and unappreciated. Benjamin Rush, great in his day and greater now, signer of the Declaration, Surgeon-General of the American army during its struggle for the life it gave the nation, author of immortal fame in medicine and a practitioner of skill and wonderful expediency in the grave emergency of a British embargo which saved the Continental Volunteers much suffering, has yet no monument to his memory. McDowell and Sims, too, and Jackson, who if ever military hero or civil stateman deserved to be so remembered by a grateful people, should long since have been commemorated in bronze or marble at the nation's capitol. They would have been if our best medical men, imitating the great Virchow

and others abroad, had taken part in the legislation of this country. The medical staff of the army and navy, too, would have had the higher rank which they deserve.

A PHYSICIAN IN THE CABINET.

Had we thus looked to our interests the President's Cabinet would long since have been represented by one member of the profession, as the law, agriculture, finance, etc., are. We should have had the Medical Minister of Public Health, for which the American Medical Association is just now pleading, much to the profit of the people in the saving of the public health and of innumerable lives and to the honor of the profession, which, above all other callings, has been the friend and benefactor of mankind, giving to humanity one of its greatest blessings and to the world many of its greatest and best men, whatever the world may say to the contrary—men who, like Hippocrates, destroyed the most fatal of the world's delusions and proved that law and not the caprice of the gods governed Nature's rule over the morbid processes, or like Vesalius, who dared and did for mankind more than ever warrior or valiant on the field of battle—Nature's uncrowned noblemen, who may yet live in the hearts of some unlaureled, even as the memory of Harvey and Jenner and Jackson and McDowell and hosts of others here unnamed, are not yet fully appreciated by the world at large. But their deeds will shine brighter and brighter as the world comes to know them and fully realize as we do their incomparable benefactions, their unsurpassed greatness and their unequaled heroism.

ORIGINAL ARTICLES.

MEDICAMENTS.

Read in the Section of Materia Medica and Pharmacy, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May 5-8, 1891.

BY EDGAR L. PATCH, M.D.,
OF BOSTON, MASS.

After considering many subjects fitting to be brought before this Association, we selected the above as one permitting us to group a few random thoughts, serving perhaps to provoke discussion, from which may come something of value.

Comparing the complex pharmacy of to-day, with its alkaloids, glucosides, neutral principles, and synthetic compounds; its coated pills, lozenges, tablets, triturate tablets, capsules and cachets, with that of the near past, manipulating the crude material into infusions, decoctions, tinctures, powders and pills, we are sometimes led to call a halt and ask if scientific medication is any nearer, and inquire if disease is held more in abeyance by this great array of rare and expensive remedies.

As pharmacists we may not be able to discuss why quinine at twenty-five cents an ounce cannot do all the work it performed when two dollars an ounce, nor why it is replaced by a patented product, antipyrin, of five times the present cost of the alkaloid.

We cannot tell why antifebrin at four dollars a pound shall have a different action from the same chemical product called acetanilid, costing one dollar a pound.

We can only press forward in the rush, and secure as early as possible the new medical novelty, that the commercial enterprise of the manufacturer provides, and the bitterness of human distress, with the eagerness of the physician to employ every adjunct to power of relief, creates a demand for.

The question is often asked, "Is not the manufacturer with his pseudo proprietary or patent remedies an unmitigated evil?"

The physician, distressed by the demand upon his time for the consideration of the claims of legions of new remedies:—chagrined by learning that he has been giving chlorides and sulphates and attributing their effects to phosphates:—mortified at being misled into prescribing nostrums that in composition bear no relation to their schedule of contents, declares war.

The pharmacist, annoyed at being forced to invest his capital at a loss, purchasing an original package for a single demand, or adding to his stock the tenth novelty or synthetic of similar intention and untried value, into which enters none of his learning, originality or skill, becomes disgusted.

Both appear to be planning a "coup de main" when the actual merit of some such compound and the great and permanent good it performs opens up a new era of tolerance.

Will it ever be possible to establish a joint commission of physicians and pharmacists to examine and report upon these products?

Each remedy to be investigated, and, as far as chemistry can determine it, first be proven to be true to name and assumed composition, then to be tested for therapeutic value by those perfectly capable of giving it its right estimate.

The blame of blind medication by physicians, the needless use of improper remedies, and faulty self-treatment by an uneducated public, is chargeable to physicians and pharmacists alike.

The one profession prescribes and teaches the public to call for the remedies and the other too often recommends them. Ignoring this class of medicaments, is it possible to secure anything like uniformity in medication? Has there been a decided advance in this direction? Each new class of preparations is supposed to further progress. How far this may be true let us consider.

Formerly great divergence was caused by the lack of a national standard, but now that we have one of the best pharmacopœias extant do we have constancy in composition and activity of remedies? Unfortunately many physicians and some pharmacists ignore the pharmacopœia and govern their course by a dispensatory that may or may not antedate the standard, and is not intelligently compared with it.

Again, the great variation in crude material, and the modification by manipulation prevent uniformity.

The class of fluid extracts was supposed to supply uniform, concentrated solutions, permitting small dosage, with less alcohol interference than tinctures, and free from the ferment changes of infusions and decoctions.

Assuming that the menstruum was alike for the same drug, faulty storage in too damp or too dry a situation might alter the strength of the drug from 10 to 40 per cent. by variation in moisture alone. This moisture diluting the alcoholic solvent affects its power of solution. By variation of 20 degrees F. in temperature at time of percolation, 25 per cent. difference in strength may occur. In addition to this, note the facts that the call has been urgent to modify menstrua so that the fluid extract may be used for making tinctures and syrups, and you perceive that many of this class are not fluid extracts in any accepted sense of the term.

The use of this class for making infusions and decoctions is of course a radical departure from right practice in nearly all cases. Water dissolves gums, sugar, extractives, etc., that are largely rejected by alcoholic menstrua, while the latter dissolve volatile oil and resin combinations, tannin combinations, alkaloids, etc., that are insoluble in water, and preclude the miscibility of such fluid extracts with aqueous vehicles.

Competition and storing to complete precipitation have further modified strength in drug and menstrua, until physicians testify that they find one pharmacist's tincture as strong as another's fluid extract and that tinctures, infusions and decoctions are often nearly valueless.

To illustrate this point we present five samples of fl. ext. belladonna. The official is made from the root with alcohol of 91 per cent. weight strength as menstruum. It averages to contain 8 per cent. of extractive and 83.7 per cent. alcohol by weight. No. 1, Ext. 5.6 per cent., Alc. 87.12 per cent. No. 2, Ext. 7 per cent., Alc. 83.62 per cent. No. 3, Ext. 16 per cent., Alc. 57.12 per cent. No. 4, Ext. 16.3 per cent., Alc. 48.7 per cent. No. 5, Ext. 15 per cent., Alc. 47.8 per cent.

(Examined by E. E. Bickford, Ph. G., Mass. Col. of Pharm.)

You will observe that those containing least alcohol are densest and darkest in color. This is due to excess of water and solution of more extractive and coloring matter. Should a prescription be written calling for this fluid extract and camphor or other volatile oil, as in the official Lin. Belladonna, these fluid extracts will not dissolve them.

We also show five samples of fl. ext. of aromatic powder. No. 1, Ext. 10 per cent., Alc. 60.6 per cent. No. 2, Repercolation, Ext. 10 per cent., Alc. 61 per cent. No. 3, Ext. 7.7 per cent., Alc. 64 per cent. No. 4, Ext. 6.1 per cent., Alc. 54 per cent. No. 5, Ext. 2.3 per cent., Alc. 45 per cent.

Physical inspection of these samples shows their great variation.

To show the character of infusions and decoctions made from standard fluid extracts, we present Inf. Buchu, Infus. Capsica, Infus. Pruni Virg., Dec. Cinchonæ Flavæ and Dec. Uvæ Ursi.

Observe their unsightly appearance and note that filtration removes much of their activity.

This line of illustrations might be extended to great length, but these presented should be sufficient.

MEDICATION BY PILLS.

A pill should be a mass of medicinal matter spherical or ovoid in form, of such consistence as to maintain its shape and yet be readily soluble or disintegrated in the fluids of the stomach.

If properly made, no doubt a fresh pill is always better than an old one. It is not in our province to tell what the physician shall order in pill form, but it is a great pity that more discrimination is not used in this direction, and it may in some cases be better for the patient that the pill is old and does not act. The superiority of finish and greater palatableness of coated pills and the delay incident to waiting for freshly made pills has opened the way to the introduction of those of manufacturers. We are not prepared to say that this is against uniformity. If you examine the thirty samples of pills put up extemporaneously, you will find a wonderful variation in the products obtained by the same prescriptions.

If you compare the thirty specimens from the manufacturers, you find a great range of style.

Note the citrate of iron and quinine pills, green, red and black. The official salt is red.

Note the A. S. & B. pills. Mostly black. The mass is greenish, but the doctor says the black pill is more active, and so the patient must have a painted pill. Note the yellow quinine pills. This is simply due to age. Quinine, cinchonidine and many other masses change in this way.

Note the five kinds of Blaud's pills.

The common formula calls for equal weights of ferrous sulphate and potassic carbonate. This gives a large excess of potassic carbonate and an alkaline pill. Such pills gelatine coated, the coating dulls. Note then this glossy pill with a

mass nearly neutral, practically Vallet's mass with potassic sulphate added. Notice this beautiful pill, type of a line of "*gelatine-coated*" (?) goods "*without pin-hole.*" An hour of maceration in water does not expand any gelatine or act upon the pill. Cutting with a pen-knife reveals a *sugar coating*. Alcohol removes its glossy coating of *resinous matter*. Note how readily the iodide of iron pills decompose.

Yet, despite the fact that the call for style and durability has led to the introduction of wonderful "*improvements*" (?) in pill making, it is doubtless true that manufactured pills average being nearer to their assumed composition than will the same number and variety obtained at the dispensing counter.

TABLET MEDICATION.

As a supposed advance upon pills, compressed tablets were introduced. The general claims were—"made from dry powder, without excipient and much more soluble than coated or old stock pills."

These claims are in a measure fallacious.

Crystalline salts can often be compressed without the addition of foreign matter, but powdered drugs and such chemical products as sodium salicylate, reduced iron, quinine sulphate, etc., must be moistened with some excipient, granulated and dried, before compression.

To prevent the adhesion of many of these masses to the dies, some agent must be employed for lubrication and this diminishes the solubility.

Brief consideration will show that a compressed tablet, offering much less surface to the action of the solvent than does the original material in powder form, will always be less soluble.

If the reverse occurs the tablet cannot be true to its label. To illustrate. We have some quinine bisulphate, some tablets of the same made by compression without any addition, and samples of commercial products.

You observe that the salt dissolves by much agitation in the quantity of water used; the correct tablet much slower, but, presto, the commercial tablet falls apart and dissolves quicker than the original salt. The bubbles of gas evolved during this change hint at the character of this "improvement."

Note how quickly this sodium salicylate dissolves. Observe the difficulty in dissolving the tablets. Press the tablets between the fingers and note the greasy feeling. Assay and find .003 of grease in each tablet. This gives them a fine finish and tends to prevent change, and the fact that thousands of pounds are prescribed may show that their slow solubility does not impair their physiological action.

The physician wants a tasteless tablet. Note how it is arrived at in the quinine and chocolate tablets before you. The sweetest, most delicious, can be taken ad libitum. One physician personally used the greater part of an entire package without action.

Note the variation in these alkaline antiseptic tablets. All have the same formula. Note that some make a practically clear solution. Yet if the quantity of eucalyptol, thymol and menthol claimed, was in each tablet, it would be physically impossible. But the physician may reject the stronger tablet, true to its label, and give preference to the weaker, fancying the manufacturer has some sleight of hand to overcome natural law and take his rivals at disadvantage.

Yet this form of medication has presented to the physician many valuable remedies in convenient form. It is only necessary to call attention to these peculiarities of method that you may intelligently give each its due measure of merit.

TRITURATE TABLETS.

The suggestion of Dr. Fuller that active medicinal agents be thoroughly triturated with milk sugar, the mass dampened and formed into tablets by pressing in hard-rubber molds, furnishing a friable, readily soluble product of accurate dosage, has met with the approval of many physicians.

For hypodermic use and for the great majority of remedies that can be administered in small dose, this form is undoubtedly an advance over the pill or compressed tablet triturate.

If the minimum amount of moisture is used, the change incident to molding and drying is very slight. It is a misfortune, however, that many agents are ordered in this form that are not at all adapted to it; as large doses of solid extracts, and salts that suffer decomposition when mixed and moistened.

CAPSULES.

Gelatine capsules have been recommended as furnishing a means of administering nauseous remedies in condition ready for rapid assimilation.

The intention is sometimes interfered with by the druggist first forming a pill mass of the material and placing this in the capsule, instead of using the dry powder. The moisture of such a mass, if excessive, may soften the capsule, consequently a hard mass is often used.

We have found great variation in the size of capsule employed for the same prescription, and failure to instruct the patient as to the character of the container, has brought about some very amusing episodes.

WAFERS AND CACHETS.

The wafer, a disk of flour and gum, is well adapted for use in administering disagreeable powders. A common difficulty in using them consists in moistening too much before folding,

producing a soft unsightly mass. The seal or cachet, a special form of wafer, is preferable. The edges only are moistened and two sealed together with the powder between. We believe an improvement over the present hard pills would be the furnishing of these cachets in shape and size to take pill mass of rather soft consistence, but not soft enough to impair the cachet.

ELIXIRS.

This class of medicaments has come to stay. It is a radical departure from the theory of medication by small dosage, using active fluid extracts, resin, resinoids, alkaloids, etc. These pleasantly flavored, mildly alcoholic solutions, seem to be popular in proportion as they are agreeable in taste, and to meet this requirement they are sometimes divested of much medicinal activity.

One illustation, the examination of eight samples of elixir of three phosphates, will suffice.

RESULTS OF ASSAYS.

No.	1.	Quinine as Sulph.,			in each	fid.,	.730	gr.	Strych.	.017 gr.
"	2.	"	"	"	"	"	.069	"	"	.015 "
"	3.	"	"	"	"	"	.180	"	"	.013 "
"	4.	"	"	"	"	"	.425	"	"	.018 "
"	5.	"	"	"	"	"	.384	"	"	.016 "
"	6.	"	"	"	"	"	1.000	"	"	.017 "
"	7.	"	"	"	"	"	.98	"	"	.016 "
"	8.	"	"	"	"	"	1.00	"	"	.0165 "

The last two contained chloride of iron instead of phosphate of pyrophosphate. This innovation was undoubtedly made to furnish a permanent elixir miscible with water. The others, made with phosphate and pyrophosphate of iron, inevitably grow dark and form a cloudy solution when mixed with water.

We present five samples of so called elixir of three phosphates, and five of elixir gentian with tincture chloride of iron.

This running fire on preparations serves to show the variation in medication arising from manipulation alone. Add to this the variation in crude material and we see that accurate and uniform medication is far away in the future. Yet there is a cry from the Egypt of dimness for more light through the window of standardization.

Can this be practically arrived at?

We claim that no ordinary chemist, well versed in the theory and practice of analysis, is capable of obtaining reliable results with most assay processes now in use, without much previous practice with each method. Much less can the pharmacist, constantly interrupted with the other demands of his calling, perfect himself in many processes of assay. The errors arising from false standards so obtained would introduce an element of danger more serious than any yet mentioned. We take at random results obtained by different workers on the same samples of drugs, each assayer having quite the average ability and better than ordinary facilities for doing the work.

We might extend this illustration through many assays, but scrutiny of this brief table will disclose the point aimed at.

	Drug.	Alkaloid. Per Ct.	Free Drug.	Cantharidin. Per Ct.		Morph. Per Ct.	Morph. Per Ct.
No. 1.	Bell Leaf.	.6	Cantharides.	.630	Po. Opium	15.48	Laud. 15.
" 2.	"	.64	"	.680	"	15.42	" 15.2
" 3.	"	.48	"	.700	"	12.00	" 13.5
" 4.	"	.43	"	.430	"	11.5	" 9.
" 5.	"	.04	"	.220	"	9.	" 13.
" 6.	"	.064	"	.415	"	13.5	" 14.
" 7.	"	.024	"	.840	"	12.5	" 11.
" 8.	"	.038	"	.615	"	10.75	" 13.3
" 9.	"	.24	"	.328	"	11.25	" 12.
" 10.	"	.58	"	.425	"	16.	" 14.

All processes involved gravimetric estimations.

We also give the percentage of activity in eight important drugs, as stated by five manufacturers and by five text books. Different processes are used by the different assayers.

DRUG.		MANUFACTURERS. Grav. Assay.				
Nux Vomica	Strychnine	.9 —2.5	1.5 vol. mixed	1.5 vol. mixed	2.1 vol. mixed	Extractive
	Brucine, etc	.5 —2.2				
Ignatia	do.	2. —2.2			1. ext.	1. ext.
Bell. Root	Atropine	.7 —1.2				
Bell. Leaves	do.	.45— .58	.5 vol.	.5 grav.	.62 vol.	.5?
Hyoscyamine Leaves	do.	.4 — .64		.4 grav.	.62 vol.	.4?
Stramon. Seed	Hyoscycamine, etc	.16— .22	.18 grav.	.10 vol.	.4 vol.	.15?
Kola Nut	Daturine, etc	.28— .36	.37 vol.	.35 grav.	.4 vol.	.3?
Guarana	Caffeine	1.35				
	do.	3. —4.5				

DRUG.		TEXT BOOKS.				
Nux Vomica	Strychnine	1.6	1.26	.25— .5	.25— .5	.4 —1.
	Brucine, etc	3.15	1.90	.12—1.	2.5 —3.	1. —1.5
Ignatia	do.	1.5		1.5	.5 —1.5	1.2
Bell. Root	Atrophine	.5		.5		.4
Bell. Leaves	do.	.3 — .5	.47—1.5	.2— .5	.15—1.	.25— .6
Hyoscyamine Leaves	Hyoscyamine, etc	.3 — .5	.4 — .7	.83	.44	.44— .66
Stramon. Seed	Daturine, etc	.1 — .5	.14— .28	.05	.04— .224	
Kola Nut	Caffeine	.2 — .3	.33— .55	.1	.02	
Guarana	do.	2.			2.13	2.13
		4.	4. —6.5		4.5	5.

Will it not be dangerous to fix a standard for these potent drugs, unless with it we have a law that they shall be assayed by experienced men in State employ, at the points of distribution? Otherwise we may be left to a variation of 1,500 per cent. on account of a faulty assay!

If we have such assay and standard, the error in manipulation will be reduced to 50 per cent. as a maximum.

But if we have absolutely standard remedies, can we have *uniform medication*? Shall we not continue to hear of idiocyncrasy of patient, faulty diagnosis and prognosis, causing miscarriage of intention and application of medicaments?

Is not a desirable line of advance that of better training of the medical student in the direction of practical materia medica and pharmacy?

Is not the course of instruction in many medical colleges deficient in this respect?

Would not pharmacists be more intelligent coadjutors of physicians if the course of instruction in pharmacy colleges included more attention to therapeutics?

THE PREVENTION OF MORPHINISM. A THERAPEUTIC REVOLUTION: CODEINE AND NARCEINE, VICE MORPHINE.

Read before the Section of Materia Medica and Pharmacy, at the Forty-second Annual Meeting of the American Medical Association, Washington, D. C., May 6, 1891.

BY J. B. MATTISON, M.D.,
OF BROOKLYN, N. Y.

The prevention of disease ranks higher than its cure, and he who essays the rôle of benefactor along this line, deserves well of his fellows, be results success or reverse. I shall presume to make an effort at filling that rôle to-day; shall try to command your attention by enlisting interest in what promises to remove, very largely, a stigma that has rested long and weightily on the healing art, and by wiping out this blot on the scutcheon, secure favor by virtue of not only an advance so decided as to mark a new era in therapeutics, but, above all, by lessening in large degree the main factor in a disease that spares neither sex, state nor condition, and which, sad to say, claims for its victims more of our confréres than the world will ever know.

Pain and insomnia, with the use and abuse of morphia for their relief, are the leading twin causes of the morphine disease. Quite apart, however, is a peculiar power, *per se*, in this drug that makes it, so often, a bane after blessing—a snareful influence than which a stronger, save one, does not exist, and which carries with it, too often, degradation and death. It goes then, without saying, that if one can offer that which will bring ease, and win the "sweet restorer" *without* this harmful sequence, he will entitle himself to the plaudit of profession and public, by averting a danger that threatens the well-being of the person and society at large. Such, in much measure, I think we have in codeine and narceine. The former has long been used, to a minor extent, the latter is rare. Opinion has varied as to their value, but my experience with each, in a field special, unique, and to some extent unequaled, has brought with it a belief in their virtue along painful, insomnic lines, and a confidence so pronounced that I bespeak for them your careful, practical consideration.

I am not willing to say there can be no codeinism or narceinism, despite the statement of Fischer that "tolerance and habituation analagous to morphine, are not caused by codeine," but I do assert that the snaring, seductive power of codeine is vastly less than that of morphia and that this one negative power for harm alone should secure for it a larger share of professional confidence and field for remedial work than it has hitherto had. Nor am I ready to say that codeine has a value, aside from its anodyne, equal to morphia in inflammatory conditions, nor that it has like power as a stimulant. To neither of these does my argument apply, but solely to its use in painful, agrypnic conditions, apart from temperature rise or cardiac decline.

Codeine was discovered in 1832, by Robiquet, who wrote in its favor, and two years later, Barbier and Bertha, after a series of careful experiments, claimed its special tendency towards the sympathetic system. These reports were confirmed but, like some other valuable drugs, digitalis, for instance, the merits of codeine were for many years in abeyance, and only within the last half decade has it come well to the front with a claim for doing good work too strong to be disregarded.

Foreign physicians, especially on the continent, have always led in the use of codeine, but the time is quite here for us to follow their good example, and I cannot now do better than to commend to your careful reading a valuable paper by Lauder Brunton, the *British Medical Journal*, June 9, 1888. Dr. Brunton lauds it highly, declaring he is satisfied that, to use his exact language: "it has a powerful action in allaying abdominal pain." He cites various painful conditions in which it has served him and his colleagues well, and closing his paper remarks that he "thinks it not improbable that codeine, which has almost fallen into disuse as an anodyne, will again come into vogue." I endorse every word of Dr. Brunton's, and venture the belief that we are on the eve of a larger use of codeine, in pain and insomnia, than the American profession has yet known.

I will not weary you with stating the various

morbid conditions that codeine will control. Its province is more or less relief of any and every pain, but it is especially adapted, by virtue of its non-tolerant power, to neuralgic disorders which stand so largely and so closely in genetic relation to the abuse of morphine; and, in general, to any and all long-continued pain. Even in incurably painful conditions it is often better than morphia, bringing ease without the unpleasant gastric and other sequalæ of the latter drug.

The hypnotic action of codiene is also distinct and decided, and may be quite apart from any analgesic need. It is a reliable soporific, though sometimes acting more slowly, yet, without the dulness or headache often sequeling morphine.

A great gain in using codiene vice morphine as an anodyne and hypnotic is that it lacks that inexplicable influence of the latter—before noted—in making itself felt, apart from relief of pain, and so creating a morbid condition, a so-called "craving," that will not be denied. I confess to you, gentlemen, that though I have been studying opium and opium habitués for more than twenty years, I do not fully understand it, but am more and more impressed by this peculiar power with every case that comes under my care.

Another point in favor of codiene is the non-need of increasing the dose on long usage. The reverse so often obtains with morphia that it marks one of the distressing features attending habitual use; growing by what it feeds on, it steadily adds to the hapless lot of those who from force of conditions beyond control, find themselves compelled to mind an imperious power they are helpless to resist.

To get good results from codiene it is essential to have it pure. Such is supplied by Merck, of Darmstadt and New York. The sulphate and phosphate—the first by mouth, and the other for subcutaneous use—are the most eligible. The latter is freely soluble—more so than morphia, my usual solution being six grains to the drachm. It should be freshly made; bitter almond water tends to preserve it; I have never noted local harm.

The dose required is larger than morphia. Fischer says triple; Bartholow four times. Fischer has written more largely of codeine—detailing several years experience—than any other foreign physician, and to him is mainly due my extensive use of the drug. I commend to you his papers in the German medical press of 1888. An initial dose of one-half grain by mouth, or one-quarter to one-half grain by skin is safe, and may be repeated and increased as required.

Narceine, though so little used, is a soporific of value. It is not an anodyne. Failure will result if pain be present. The dose should be double that of morphia. The hydrochlorate—Merck—admits of hypodermic use.

Gentlemen, you have my paper. It is a plea for less morphine—more codeine. The usually accepted statement that its anodyne and hypnotic action is weak and uncertain, is wrong. It has a constant and well marked effect as an analgesic and soporific, without unpleasant secondary symptoms—nausea, headache, and general malaise so common with morphia. I urge you to use it, and especially do I commend it to the junior members of the profession, who too often are enthused with that modern mischief-maker, hypodermic morphia, and have not yet gained the wisdom given their fathers, whose experience has led them to discard—increasingly often, I am glad to say—a power so potent for ill. I speak feelingly on this subject, gentlemen, for my professional work for many years has brought me in daily contact with those—mostly our own guild—whose lives have been blighted by morphia.

The easing of pain ranks next to the saving of life, and when in doing such noble work, we do it without entailing a bondage binding, it may be, for life, the millenium will be nearer than now.

Brooklyn avenue, Brooklyn.

SOME NOTES AND REFLECTIONS ON OLD REMEDIES.

Read by title in the Section of Materia Medica and Pharmacy, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May 6, 1891.

BY L. E. SAYRE, PH.G.,
UNIVERSITY OF KANSAS.

It is a truism to every student of medicine and pharmacy that there is little that is absolute in remedies. Specifics exist in theory rather than in fact. But we may classify and safely divide all remedies, in point of time, into three classes: First, those which have come to us from very ancient date, which have been used from time immemorial, whose introduction into the materia medica dates back to the earliest history. Second, those of more recent date, but which are properly called old, those which have stood the test of criticism from all portions of the medical world—the old and tried remedies. Third, those which we very properly call "new remedies"—the new and the untried remedies. This classification, it is true, is unscientific, but is used simply to give proper perspective to my subject. It is my purpose to dwell upon the second class, the old remedies, whose efficiency has been well tried, and whose value is unquestioned.

We are living in an age of new remedies. Every medical periodical contains notices of their efficiency and power, and peculiar adaptability. They are becoming so popular that one outside of the profession might well suppose that a new pharmacopœia was at hand, which will, if not entirely obliterate the old remedies, at least over-

shadow them. I do not wish to be understood as speaking slightingly of the new remedies, but it seems natural that I should revert to the old, having devoted so much time in their study.

One can scarcely glance over the pages of the medical literature of the past half century without becoming impressed with the significant suggestion that a vast amount of empirical knowledge constitutes a great part of medical science taken as a whole. Crude drugs have come and gone, clinical observations upon them have been scored by the hundreds, and very many of these have left their impress in black and white, to be sure, in the pamphlets and volumes in which they are printed, but at present are happily reposing in the limbo of forgetfulness. The physician of to-day is heir to all this good, bad and indifferent empirical observation and information. This may be cause for much gratitude and pride, but one cannot resist the suggestion that the present evolutionary period of medical science has been at the expense of "putting a good deal of medicine of which we know nothing into bodies of which we know little." It is related of the oculist Wenzel that he had to spoil a hatful of eyes before he learned how to operate successfully on cataract. The application is too painfully obvious to need further comment. True to evolutionary theory, let us hope that all the empiricism of the past has had the practical result of benefit to science as well as society.

If one studies the medical literature appearing to-day he can clearly see that empirical ideas and practice are gradually giving place to rational methods and treatment, and, whilst many of the old remedies are continued, they are to serve a different purpose—are to be viewed from a different standpoint than that of even the few years preceding the present. Therapeutics, chemistry and pharmacy (which is largely chemistry applied to medicine) are growing side by side and are gradually changing the aspect that these remedies once had. Their application is becoming magnified and exalted, so to speak. The therapeutic uses of these remedies are to have their origin in their physiological action. Physiological action is to be explained and even anticipated or predicted by chemistry, and this action definitely made possible by the art of pharmacy.

Interspersed among the new remedies of to day we find the familiar forms of these old ones. The process of elimination will doubtless go on in the future as it has in the past, but from the present outlook it is fair to presume that such crude drugs as ipecac, rhubarb, cinchona, nux vomica, digitalis, hyoscyamus and a host of other like vegetable drugs, will continue. The same may be said of many of the inorganic substances as found in the salts of the alkalies, alkaline earths and metallic substances, their chlorides, bromides and iodides; their carbonates and sulphates; their citrates and acetates, etc. Despite the theories concerning disease and the development of synthetic chemistry, which would if it could combine the veritable antagonist to each particular disease within the molecular spaces of the "benzene ring" or the "carbon chain"—despite all this, it is fairly probable that the old remedies will live to do battle with the microbes (and their poisonous products) of the twentieth century.

But these old remedies are to take a higher place than heretofore. We are to know more about them than in the days of polypharmacy and polytherapy. We are more clearly to understand their intrinsic value. That the medical profession as a whole is every day gaining more sharply defined descriptions (chemical, therapeutical, etc.,) regarding them one can readily see by glancing at the current medical and pharmaceutical literature. Since the study of alkaloidal constituents and active principles in vegetable drugs a flood of light has been poured in upon the therapeutic value and action of these; the relation of chemical composition and therapeutic action has been fully established. Aconite, belladonna and ipecac are valuable in proportion to the amount of alkaloid they contain, and so we may say of a host of other drugs. Some drugs are for certain purposes best administered in the natural combination, for reasons we are to-day better able to give. Rhubarb doubtless owes its beneficial action in catarrh of the stomach, indigestion, etc., to chrysophanic acid, one of its prominent constituents, a powerful antiseptic. In such cases is rhubarb especially valuable, because, when the drug reaches the stomach, the chrysophanic acid is separated in the nascent condition and consequently in the condition in which it is the most active. This little bit of the chemistry of rhubarb emphasizes the fact that when this drug is administered internally this constituent should be present in its integrity. To the pharmacist as well as the physician this information is equally of importance, for to him it shows that in his preparations of this drug this constituent should be retained. The adoption and use as therapeutic agents of the alkaloids, glucosides, etc., (many of the so-called new remedies) is an exemplification of the principle of advancement above stated. It has been but a few years since there was a contempt for these active principles existing in the medical profession. Quoting from a little volume (a translation) written by Dr. Robley Dungleson in 1824, he says: "There exists an objection to the principle of thus isolating and concentrating the active parts of our remedies. Perhaps every practitioner feels that medical substances are more efficacious as they are presented to us combined by the hand of Nature, than when their active part is isolated and recombined by the hand of man. Thus we

are all inclined to give our remedies in substance, as it is called, rather than as prepared in a more convenient form by the chemist or druggist; and we are only deterred from using these natural products by the greater bulk, and other inconvenient properties of them, as compared with the more artificial preparations of them." . . . . "If we take these isolated and concentrated remedies as they are, we find that at least many of them are endowed with peculiar and powerful properties; and as nobody can deny that it is far more convenient to use remedies which are in small bulk, we have to take such remedies as if they were simple remedies, and investigate their properties as we would those of any natural production." He quotes the language of some of the profession of that day as regards the view taken of the isolated principles. He says: "Ay! here they come, one after another, vaunted to the skies for properties which sober investigation shows not to belong to them; we shall soon see them laid on the shelf, until they are again held up to the world as prodigies by some future enthusiastic searchers after novelty." In the day when these lines were written quinine, strychnine, emetine and brucine were considered novelties. In the same book Dr. Dungleson defends the use of such drugs as digitalis, prussic acid, colchicum, etc., against the popular current of thought. Only a little "looking backward" is necessary to prove the proposition that we are gaining more sharply defined ideas concerning the old remedies.

We are very much indebted to the labors of pharmaceutical chemistry for the recent studies into some minuter points concerning the nature of some of these old remedies. And I may say in passing it has been largely a labor of love. I have not space nor time to amplify upon this point. I will, however, to illustrate, give one example. I will refer to the study of the constituents of the narcotic leaves as represented by the solanaceous plants, belladonna, stramonium and hyoscyamus. In presenting this I will summarize what has been done in the direction of the chemistry of these drugs. This can best be done by reference to the alkaloidal constituents. Researches prove that the three mydriatic alkaloids, atropine, hyoscyamine, and hyoscine are contained as follows: Atropine in atropa belladonna and datura stramonium. Hyoscyamine in atropa belladonna, datur-stramonium and hyoscyamus niger. "Heavy daturine" is identical with atropie; "light daturine" and "light atropine" are identical with hyoscyamine. Duboisine is nearly pure hyoscine. Pure atropine and pure hyoscyamine as well as hyosine are isomeric alkaloid, but possess different chemical and physical properties. Therapeutically hyosine possesses about five times the calmative power of atropine or hyoscyamine. Tropine (a product from hyoscine) and tropic acid may be recombined under certain conditions to form atropine. The union of tropine with amygdalic acid is homatropine, or oxytoluyltropeine. This body will, like atropine, form salts with acids. Thus we have the valuable mydriatic hydrobromate of homatropine. This is only one of the many interesting results of chemical study bearing upon the future of the old remedies.

At the close of their term of service the committee of revision of the 1880 Pharmacopœia issued a volume of criticisms upon the old United States Pharmacopœia. It is a volume of some 350 pages, large octavo of closely printed material. The criticisms are paragraphic, brief, and concise. It is a noteworthy fact that nearly all of these criticisms are upon the old remedies. This shows us conclusively that in spite of the prominence which has been given to the new remedies, the old ones are receiving more careful attention at the hands of the pharmacists and therapeutists than ever before. Were these brief notes or criticisms expanded so as to include the text of the many articles and monographs referred to, at least 12 volumes of equal size would be made. A careful study of all this literature must convince and impress any one with the significant fact that in the past decade a vast amount of work (in the laboratory and in the study) has been done upon these. My attention, as one of the members of the committee of Revision, has been especially directed to the salts of lime, copper and iron. It is plainly evident to me that, in order to bring these salts up to the present demands, a vast amount of work is required. This involves the verification of the criticisms in the laboratory, the elimination of the old text improved upon, and the addition of new material. The work in one particular salt (hypophosphite of lime) requires several days of spare time. This salt in the future should be a standardized salt, so to speak. To this end Mr. Moerck of the Philadelphia College of Pharmacy, has contributed pages of chemical literature (See *Amer. Jour. Pharm.*, 1889, pp. 329 to 332; 386; 391). This is but one item among the many hundreds of inorganic salts and their preparations, thus to be treated and brought forward to date.

The hypophosphites of each of the other bases require special analytical treatment, but they are all to be made up to a certain well defined standard. In a general way it may be said that all of the inorganic salts are to be more sharply defined by chemical tests, and the quantitative tests are to be made more rigid and severe. Wherever possible, improvement and advance is to be made. For example, chlorinated lime; the best samples of this salt formerly assayed no more than 25 per cent. of chlorine, now, the quantitative test for this salt will demand at least 30 per cent. of this

element. No quantitative test for sulphate of copper is present in the Pharmacopœia, but a demand exists for a test which will betray a trace of impurity.

At the same time more practical and easy methods for making these tests have been studied out and the purpose is by these improved methods to make "testing" more popular even among those who are away from the centers of supply of chemical apparatus. Wherever possible volumetric tests are to be substituted for the more difficult gravimetric tests. The test tube is to be made to do more duty—made to accomplish more than it has in the past.

All this points to a state of progressiveness and indicates that these old remedies are, from a pharmaceutical point of view at least, to be viewed with additional interest. The spirit of precision and accuracy is in the air, as it were; this spirit doubtless has been caught from the sister science of medicine, for it is worthy of notice that therapeutics is advancing along the same lines of precision. This one science shows us at least most markedly that we are advancing beyond the domain of empiricism.

Medical literature, as has been suggested, has been prolific in its contributions to the study of remedial agents; the therapeutic work is even more interesting and important than the pharmaceutical, and, I may add, a more important factor in changing the present aspect of these old remedies. Unfortunately this literature is not as accessible as it might be to those who are interested in the revision of the Pharmacopœia. Perhaps it is not necessary that it should be, but I venture the remark the pharmacopœial revision must suffer in proportion to the indifference of the therapeutist in this important work. A true scientific spirit should bring together the therapeutist and pharmacist; the bearing this would have upon medical progress cannot be estimated. The discussion of this question, bearing as it does on the subject of old remedies, can better be left to others. I will, however, in closing merely touch upon it, using the words of Dr. E. R. Squibb (Ephemeris, 1889, p. 1249). After expressing his regrets that the medical profession indifferently treats the subject of pharmacopœial revision, he says: "The pharmaceutical profession, which has a more direct pecuniary interest in the subject, has continually increased in activity, discussing the subject in its organizations, and carefully selecting its very best men for its delegates to the convention." . . . This being the case he points out that these pharmacists are likely "to lead the convention" which considers the subject of revision and "the revision would show wherever there was contrariety of interests that pharmacy would prevail." Dr. Squibb kindly says in another article that "while pharmacists have been fully awake and recognized their opportunity, they have not taken advantage of this unsafe and unwise drift." "The true interests of scientific medicine and pharmacy are, of course, absolutely the same, but the interest as they exist in practice, are not always the same. And, when they are not, those of medicine should always prevail, because their relation to the sick—the object of both—is nearer and more direct. Neither can do well without the other, but the one is much closer to the issues of life and death than the other, and cannot afford to trust these issues to a more distant dependence, which must always be more largely commercial or mercantile. The Pharmacopœia is equally the reliance, the guide, and the authority of both, but cannot wisely or safely be entrusted to the control of either." But the consideration of this question may be considered remote to the interests of medicine. Be this as it may, I have thought it might be suggestive and interesting, as well, to those for whom this paper is written.

SECTION XII, ON MATERIA MEDICA AND PHARMACY.

The Section on Materia Medica and Pharmacy of the American Medical Association met in Grand Army Hall on the afternoons of May 5, 6 and 7, Frank Woodbury, M.D., of Philadelphia, Pa., chairman. H. G. Ewing, M.D., of Nashville, Tenn., being absent, owing to sickness, F. E. Stewart, M.D., of Wilmington, Del., was elected secretary *pro tem.*

In addition to the members of the American Medical Association attending the Section, there was present a delegation from the American Pharmaceutical Association, including Joseph R. Remington, of the Philadelphia College of Pharmacy, chairman of the committee; Mr. Alfred Taylor, of Philadelphia, Pa., the venerable ex-president of the American Pharmaceutical Association, who had served on the committee for revising the United States Pharmacopœia since 1840; Prof. J. M. Maisch, of Philadelphia; Prof. Edgar L. Patch, of the Massachusetts College of Pharmacy, Mass.; Prof. Chas. T. P. Fennel, State chemist of Southern District, Cincinnati, Ohio; Mr. B. T. Fairchild and Prof. Bedford, of New York City. This delegation was welcomed appropriately by the chairman, and invited to take part in all the deliberations of the Section. A committee of the Section was formed to act on publication of papers and other business that might be referred to it, this committee consisting of the officers of the Section and Mr. Joseph P. Remington.

The following papers were read and discussed:

1. Pharmacopœial Nomenclature and the Latin of Prescriptions, by Prof. Joseph P. Remington,

of the Philadelphia College of Pharmacy, and member of the committee for revising the United States Pharmacopœia.

2. The Present Status of Materia Medica and Therapeutics, by J. W. C. Cuddy, M.D., of Baltimore, Md.

3. The Working Bulletin System: A Proposed Investigation of the Materia Medica of the World under the Auspices of the Government of the United States, by Frank E. Stewart, M.D., of Wilmington, Delaware, Demonstrator of Materia Medica and Pharmacy, Jefferson Medical College, Philadelphia.

4. The Future Chemist, by Prof. Chas. T. P. Fennel, of Cincinnati, State Chemist for the Southern District, Ohio.

5. Discussion on the United States Pharmacopœia, opened by Prof. Horatio C. Wood, M.D., etc., president of the Convention for the Revision of the United States Pharmacopœia. In this discussion participated Prof. Remington; Dr. Kirnan, of Chicago; Prof. Whelpley, of the St. Louis College of Pharmacy; Dr. Prentiss, of Washington; Prof. Patch, of the Massachusetts College of Pharmacy; Prof. Maisch, of the Philadelphia College of Pharmacy, member of the committee on revision, and permanent secretary of the American Pharmaceutical Association.

6. On the Relation of the Profession to Drugs Bearing a Trade Mark; with some Remarks in Regard to the Value of the Pharmacopœia to the Physician, by Hobart A. Hare, M.D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College, Philadelphia.

7. Pharmacy for Medical Men, by Prof. P. W. Bedford, of New York City, member of the committee for revising the United States Pharmacopœia, etc.

8. American Pharmacy and Legislation, by H. P. Reynolds, Plainfield, N. J.

Read by title:

1. The Relations of Physicians and Pharmacists, by E. L. Boggs, M.D., Charleston, W. Va.

2. On the Officinal Sulphocarbolates, by Wm. F. Waugh, M.D., Philadelphia, Pa.

3. Potassium Chlorate; Its Toxic Effects, by G. A. Fackler, M.D., Cincinnati, Ohio.

4. Some Notes on Old Remedies, by Prof. L. E. Sayre, of the University of Kansas.

5. "Guests of This Hotel are Not Permitted to Use Iodoform," by I. N. Love, M.D., St. Louis, Mo.

A very important communication from Dr. Chas. Rice, of New York, chairman of the committee for revising the United States Pharmacopœia, was read, proposing a commission of physicians and pharmacists, to be appointed jointly by the American Medical Association and American Pharmaceutical Association, for the consideration of subjects, both scientific and ethical, of mutual interest to the professions of medicine and pharmacy, and to report annually to the American Medical Association.

In the discussion upon this paper, it was generally conceded that the recommendation of Dr. Rice was timely and valuable, and that the formation of the Section on Materia Medica and Pharmacy was instigated by the same motives and opinions expressed in the communication, as by this means any subject of interest and importance to medicine and pharmacy could be reported promptly to each national association.

The papers having all been read, a business session was held.

The business committee of the Section reported:

1. That as the communication of Dr. Rice was also covered by Dr. Stewart's paper, suggesting the formation of a special society of physicians and pharmacists, and as the subject was a very important one, that the entire subject be referred back to the committee to bring before the Section again next year for further consideration.

2. It was recommended that the committee bring before the meeting next year a plan for more complete organization, with the view of facilitating business and developing the interest of members of the American Medical Association in the Section on Materia Medica and Pharmacy.

3. Resolved, that the Government of the United States be memorialized by the American Medical Association in favor of the plan proposed by Dr. F. E. Stewart, whereby the laboratories of the army, navy, marine hospital service, Smithsonian Institution, customs service, agricultural department, and other departments of the Government having charge of the analysis and identification of drugs, may be facilitated, and the results of their investigations made public, and that the information thus gathered may be disseminated for the general benefit of the professions of medicine and pharmacy.

The report of the committee was accepted and adopted, and the last resolution was directed to be referred to the general session of the American Medical Association for its consideration by the chairman of the Section.

An election for officers for the ensuing year resulted in the reëlection of Dr. Woodbury as chairman, and for secretary Dr. H. M. Whelpley, of St. Louis, was unanimously chosen, the secretary casting the ballot of the meeting.

The Section then adjourned.

Signed: FRANK WOODBURY, M.D.,
F. E. STEWART, M.D., Chairman.
Secretary *pro tem.*

A MEDICAL CONSUL.—Dr. Jeremiah Coughlin, of Brooklyn, has been appointed by the President to be secretary of legation and consul-general of the United States at Bogotá.

THE ACTION OF THE TURKISH BATH IN DISEASE.

Read in the Section of Medicine and Physiology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY CHAS. H. SHEPARD, M.D.,
OF BROOKLYN, N. Y.

One year ago, I had the honor of presenting before this Association certain data regarding the treatment of rheumatism by the Turkish bath. Several gentlemen controverted the position taken in that paper, and now it will be my endeavor to give some facts substantiating what was then laid before you, under the title of

THE ACTION OF THE TURKISH BATH IN DISEASE.

The Turkish bath is simply a convenient manner of applying heat to the body, and is readily adapted to any diseased condition. It is not exhausting, as many suppose, nor is its salutary influence measured by its power to produce abundant sweating. One of the most remarkable properties of the bath is its ability to allay the sense of fatigue. There is an invigoration arising from the contact of the vitalized skin with the dry heat of the bath, which gives an increased power of drinking in oxygen, through channels previously closed, and withal there is little sensible loss of matter, what is parted with being only that for which the system has no further need.

One of the uses of ordinary perspiration, is to maintain the equilibrium of temperature, on which the safety of the individual depends. As the natural average temperature of the human body is 98° Fahrenheit, Nature has provided that this standard shall be maintained in every latitude, and under all atmospheric variations. When unusual heat is applied to the surface of the body, the system is called upon to protect itself by maintaining its equilibrium at 98°, and this is accomplished by throwing out water to be evaporated from the surface. As when water becomes vapor, a large amount of heat becomes latent, so the higher the temperature, the more abundant the flow of sweat, and the more rapid the evaporation, and the heat is carried off latent in the vapor. Thus man is enabled to endure habitual exposure to an artificial temperature of dry air as high as 400° Fah. Carpenter says: "Many instances are on record of heat from 250° to 280° being endured in dry air for a considerable length of time, even by persons unused to a particularly high temperature; and persons whose occupations are such as to require it, can sustain a much higher degree of heat, though perhaps not for any very long periods. The workmen of the late Sir F. Chantrey have been accustomed to enter a furnace in which his molds were dried, while the floor was red-hot, and a thermometer in the air stood at 360°."

Men engaged in various branches of manufacturing industry, such as ore smelting, iron foundries, rolling mills and glass works, are habitually exposed, for lengthened periods, to heat ranging from 200° to 350°, which they are able to sustain for years without any loss of vigor, or detriment to health. And this simply on account of the seven million little glands spread over the inner surface of the skin, which, by evaporation, send off the heat that would otherwise raise the temperature of the body. We know that no amount of heat can raise the temperature of water above 212°, so long as the steam is allowed to pass off. Just so a man can endure a temperature of even 600° for a time, with impunity, provided the skin acts freely and the atmosphere about him is dry, and drinks up rapidly the moisture that exhales. So far, indeed, from high temperature proving injurious, it is the adaptability of the skin to resist high artificial heat upon which the Turkish bath relies for its marvelous sanitary and curative powers.

Thus we see that there is no foundation for the popular prejudice about the hot air bath increasing the temperature to a dangerous degree. Such a prejudice is not only condemned by physiology and experience, but it is in direct antagonism to the very laws of our being. Now how comes it that, by a slight increase of heat, there should be a sudden power given to the skin to throw out moisture? and whence comes this moisture? From the blood. And to be able to furnish moisture, the blood must be brought to the skin; and this is the grand secret of the *modus operandi* of the Turkish bath. It is by equalizing the circulation, and thus removing congestion, whether of the lungs, the liver, the brain, or any internal organ, or tissue near the surface, or the skin itself. When heat is applied to the surface of the body, the blood that is feebly circulating within the trunk is brought to the surface and the extremities, and its water, loaded with effete and waste material from the system, is given up to protect the skin. If the heat is continued, all the energies of the system are aroused to bring into circulation the blood that has been stagnant and congesting the lungs or liver, or some other organ. Then all the absorbents are set to work, to take up any dropsical effusion, whether in the cellular tissue, or in the closed cavities, as the abdomen or chest, that it may be restored to the circulation and evaporated from the surface.

Then, again, by drinking pure water, the blood is replenished with wholesome material, while perspiration eliminates the water and poisonous matter from the system. Indeed, this is the most important purpose which perspiration serves. Man perspires, because perspiration, being the watery portion of the blood, carries out with it all extraneous and poisonous matter, thus remov-

ing all constitutional taint whether of scrofula, cancer, tuberculosis, or any blood disease.

The blood has to dispose of the worn out material which results from every motion of the body, or the mind. In equalizing the circulation we provide for the nutrition of the body; and the blood, while bringing fresh fibre, has in turn to remove old poison. In fact the blood, with its watery portion, is washing the whole internal man every instant of time, otherwise he returns upon himself his own pollution.

While, then, we are constantly creating the phenomena of life, we are at the same time generating the elements of death. Your own breath will kill; all that should come from you, if pent up within you, kills; it is poison, and here the Turkish bath comes to the aid of Nature, and purifies the blood more directly and thoroughly than any other means that science or ingenuity has ever before suggested. The proselytes of Mohamet believed that by the agency of the bath, barrenness was removed. With the ancient Mexicans it was used, not only by the sick, but by persons who had been stung by some poisonous reptile.

The skin, in this climate, and with our artificial life, is so much covered as to render it in a large degree inactive, and therefore a fruitful source of disease. Frequently it is in a state of partial paralysis, as is shown when entering the hot room of the bath; the face and hands feel the impression acutely and the rest of the body comparatively little. The least sensitive part of the body is that which is covered by clothing. Exposure to the light and air gives the skin more vitality, and therefore it is more active and sensitive. It is to be noted that among the intertropical peoples, where the skin was naturally kept in an active condition, the bath was used only in case of disease.

It is well known that but a comparatively small portion of the skin can become disorganized without causing death. In fact, we live through the skin. Every portion is pierced with fountains which flow with foul water so long as there are any impurities within, and with distilled water when they are expelled. Hence, the disagreeable odors that come to us as a warning. The impurities as well as the cleansing powers of man come from within. Disease and dirt are almost synonymous terms.

Thus do we have a large control over disease by means of the skin, and we can command the skin by means of heat. The skin becomes the prophylaxis of the other organs, and if there is any vitality left in the other organs, there is hope of life. The skin literally brings us in touch with the external world, and is the means of casting out the disintegrated tissues of the body, as well as the poisons produced by the operations through which life is generated during every second of time. Therefore this is necessarily the first thing to be attended to, for if that organ is not kept in good working order, the whole body must suffer, while with it in proper condition health reigns supreme.

The practice of the bath refines the olfactory nerves, and renders them capable of noticing smells otherwise imperceptible. The healthy body is endowed with a sweet odor, described by those whose organs are sensitive enough to detect it, as resembling fresh sawed fir boards. There are odors to certain conditions of disease that are patent even to the superficial observer. Pathology, when carried to a greater perfection, will probably enable us to detect, by the nose, the existence and condition of many maladies. Herein lies a comparatively uncultivated field of diagnosis.

For the many troubles incident to childhood, the Turkish bath is a panacea. With me it has superseded all other treatment, and for carrying children through all eruptive fevers of that period, it has proved equal to every emergency. The bath has been administered to children from the time they were one month old, and on occasion daily for several months, and the result has been in every way satisfactory, notably in a case of croup. A small boy about 3½ years old, was taken late at night with the harsh ringing cough of croup, and together with the labored breathing was in a very pitiable condition. He was taken to the hot room of the bath. At first the heat did not seem to give relief, on the contrary the symptoms apparently were aggravated. Rubbing of the arms and legs was then begun, and this was pleasant to the child. An expression of enjoyment, which was his first spoken word, encouraged perseverance. Very soon perspiration began, and then the unpleasant symptoms gradually lessened. He was kept in the hot room about an hour, until his breathing was perfectly natural and the perspiration most abundant, when he was washed off and put back to bed. He went directly to sleep; no more coughing; nor was he heard from again till after daylight the next morning. That was the last of the croup.

In the long list of diseases none seem more susceptible of relief by the hot air treatment than gout, rheumatism, and neuralgia. Gout is perhaps the least amenable, but a temperature of from 160° to 170° acts as a complete anæsthetic to the local pains of the paroxysm, and it removes also the primary cause of the gout by favoring the re-absorption of deposited urates, and their combination with oxygen, by which they cease to be injurious to the frame. Oxalic acid, a prominent product of this oxygenation, has been found in the sweat of gouty persons.

The action of the Turkish bath in rheumatism has been phenomenal, and commands the respect

and admiration of all who have investigated the subject. As this disease is indicative of an inert skin, and as the bath immediately awakens all the activities of that organ, the special poison of rheumatism is quickly eliminated and inflammation is consequently allayed. A frequent and persistent use of the bath has many times relieved what were considered intractable cases, and that which was formerly a matter of endurance for months has been reduced to weeks. The immediate relief from pain while in the hot rooms renders the treatment more than agreeable, and makes the patient desirous for its repetition, and thus the sufferer is gradually restored to his normal condition, while the freedom from continual dosing or blistering is often an object of profound gratitude. There is never any unpleasant sequela attending the Turkish bath treatment, and even when there is a tendency in the system toward the development of rheumatism, the frequent use of the bath will counteract and relieve it.

The recuperating force of the Turkish bath in neuralgia is shown by the following case. "Billy Edwards," a noted light weight, was brought to the Institution by his physician in January, 1875. He had suffered the excruciating torments of facial neuralgia, or true tic, over two months, and found no relief, though he had applied to several prominent physicians in New York City. He was given two and sometimes three baths a day, remaining under treatment ten days, when he left, entirely relieved of pain, and feeling quite well.

In the treatment of tuberculosis, the Turkish bath has proved a reliable and efficient agent. It has been shown by a series of experiments that the earlier stages of the malady are susceptible of much amelioration by the use of the hot air treatment, which comes from its power of altering the chemical and electrical conditions of the organic structures of the body, and abstracting its fluids. The importance of the functions of the skin in the pathology and treatment of phthisis is conceded by all. By eliminating poisons through its pores we restore its respiratory action, and so enable it to assist the lungs in their important functions. In the latter stages of this malady profuse sweating is one of the worst symptoms which we have to combat, but the direct action of the bath has been more strongly shown in removing night sweats than in any other symptom. At such times it is important to enlist every organ that can assist in the work. Hot air promotes the chemical changes that are constantly going on in the lungs, and stimulates the skin to its respiratory functions. The more perfectly this work is performed the greater the success in the treatment. As yet no agent has been found to do this work equally well.

Dr. Leared, one of the physicians of the London Consumptive Hospital, wrote as follows. "Three patients affected with consumption have been for some time subjected to the Turkish bath treatment. They were all in an advanced stage of the disease, as the tuberculous deposit in the lungs was not only considerable, but had become softened or ulcerated. The general symptoms of all were greatly improved, but the most remarkable circumstance is, that in one case, the signs indicating softened tubercles have disappeared, the lung becoming comparatively dry and solid."

These patients were admitted to the hot chamber for an hour every second day, the temperature not exceeding 140°.

Sir John Fife, Senior Surgeon to the Newcastle Infirmary, says: "Great must be the value of a process which in a few minutes will secure a general diaphoresis, bring the circulation to the extremities, and equalize arterial action. It may be safe to conclude that it will be of service in every case of internal congestion, and its effects are most remarkable in obviating disorders and palliating the diseases of the liver and kidneys; for it not only distributes a more equal circulation, but allays spasm in the excretory ducts, and I am unable to point out any class of cutaneous diseases in which the Turkish bath may not prove an effectual treatment or an important auxiliary. In bronchial inflammation or laryngeal, the surface affected is instantaneously reached.

Prof. H. von Ziemssen, in his new Medical Encyclopædia, in the part devoted to kidney diseases, says: "Diaphoresis constitutes the most reliable means of reducing the dangerous dropsy. It is also the only treatment from which I feel justified in expecting a curative action on the process of disease going on in the kidneys. In this sense an efficient diaphoretic treatment fulfils not only the *indicatio symptomatica*, but actually also the *indicatio morbis*, in a better and surer manner than any other mode of treatment. In chronic parenchymatous nephrites, I have repeatedly found that as soon as I succeeded in producing a profuse sweat every day, a more abundant flow of urine set in, and the percentage of albumen became less. We must remember that in the chronic form of Bright's disease we have to deal with a much more extensive alteration, both of the vessels and tissues, and if we expect to effect a cure by diaphoresis we must set to work in a thoroughly methodical manner and carry out the treatment with obstinate pertinacity. The method most agreeable to the patient, and most effectual, is to heat the skin in dry hot air, as is done in the so-called Turkish bath."

Dr. Sheppard, in charge of Colney Hatch Insane Asylum, Eng., says, "There is an unmistakeable dread of the hot air bath as regards those who suffer from heart disease or a tendency thereto, arising from a fear of undue stimulation of the circulatory system, but it is remarkable

that the very contrary effect is produced. The bath tranquilizes and subdues."

On this point Sir John Fife adds, "In cases of heart disease the patients have undergone the process with unlooked for benefit; the extreme heat exerts less influence on the heart than the ordinary bath."

Dr. Erasmus Wilson says, "Scrofula is imperfect nutrition, cancer is imperfect nutrition, indigestion, rheumatism, gout, neuralgia, are imperfect nutrition. Give a power by which nutrition can be regulated, and you immediately control these various diseases. Now there is no power by which the proper direction of nutrition can be attained, excepting through the skin, and that I believe to be the explanation of the extraordinary results which seem to flow from the bath. The bath does no more than regulate nutrition.

In our own country, such physicians as Dr. W. A. Hammond, Dr. Austin Flint, Senior, Dr. Lewis A. Sayre, Dr. John T. Metcalf, Dr. W. H. Van Buren, Dr. George T. Elliott, Jr., Dr. F. N. Otis, and many others, have borne strong testimony to the great value of the Turkish bath in disease.

In this flood of evidence, which is not a tithe of what might be adduced, it is apparent that the Turkish bath has the effect of different medicines, in that it removes the symptoms for which they are administered; thus it is a cathartic, a diuretic, a tonic, a detersive, a narcotic, but the effect is produced only when there is cause. It will bring sleep to the patient suffering from insomnia, but will not, like opium, make the healthy man drowsy; and relieve constipation without bringing on diarrhœa to the healthy, as aloes would. It is thus a drug which administers itself according to the needs, and brings no evil consequences, working only to place the system in a natural and healthy condition.

With a full knowledge of the uses of different degrees of temperature, we have an entire command over those acute disorders which constitute nine-tenths of our maladies.

The practicing physician, with caloric as his servant, can frequently ward off and disperse an attack of disease.

To him who would be more than a mere physician, who would seek to prevent disease as well as to cure it, this subject opens a field of immense opportunity, both as regards himself, and the community in which he lives.

The signs of the times are more than ever encouraging for the future. The medical horizon is continually broadening. The constant discovery of new remedies shows dissatisfaction with the past. The more liberal of our profession are welcoming all helpers. Already preventive medicine is stepping forward in the march of progress, and among the agencies to aid in the material welfare of our race, both in prevention and cure, the Turkish bath will take rank second to none.

We are beginning to understand the value of the sun's rays, which the Egyptians, centuries ago, symbolized by the human hand. The sun is the source of all our physical blessings, and heat its most important effect.

Certainly a beginning in the use of the Turkish bath as a remedial agent, has been made. It has passed the experimental stage, and in the not distant future, medical science will necessarily be compelled to adjust itself in harmony with the facts so readily at hand, and so easy of demonstration.

What has been uttered is prompted simply by a strong feeling that from a study of this subject mankind may derive an immense benefit, and that our profession should take the lead in the grand work.

The Turkish bath has now been before the American public for several years, and by no means has it been accepted as fully as its merits warrant, but as Lamartine said, "Time respects only that in which he has himself a part."

Dr. Thudichum, in an able monograph read before the Medical Society of London, concluded in these words, "I have now put before you what I think right, and what we should develop. A boon to mankind, your nation, and every individual in this room. Hot air, combined with cold effusions, with shampooing, with exposure of the body to light and air, await your approval as medical agents, and your application to those under your care. I hope that you will seize the opportunity, and secure for this society a share in the merit, similar to that of which Hippocrates was proud, of having introduced the bath in the treatment of disease."

NOTES ON THE TREATMENT OF SYPHILIS. ITS EVOLUTION AND PRESENT STATUS.

Read before the Ohio State Medical Society, June 17, 1891.

BY WILLIAM THOMAS CORLETT, M.D., L.R.C.P., LONDON.

OF CLEVELAND, O.

Professor of Dermatology in Western Reserve University, Medical Department, Consulting Physician for Diseases of the Skin, to Charity Hospital, St. Alexis Hospital, and the Hospital for Women and Children.

The treatment of syphilis has completed a cycle, and to-day we stand upon the same ground that our medical fathers occupied nearly four hundred years ago. Familiar as they were with gonorrhœa, which even in the days of Moses was known as a "running issue out of the flesh;" familiar with the local contagious ulcers of the genitals, which had been accurately described by the most ancient medical writers of Arabia, Alexandria, Greece and Rome, they were, in 1494, amazed at the advent of a disease such as they

had never seen before and whose ravages they were unable to assuage. For nearly half a century these three diseases retained their identity in medical writings, and not until the generation passed away which had observed its invasion did confusion prevail to retard the course of future progress.

Thus the first authentic observations of the treatment of syphilis were made while it enjoyed the distinction of being a disease *sue generis*.

It soon became known that mercury had the power of controlling the disease, and it was adopted as the standard treatment. But the indiscriminate use of this potent drug led to results even worse than those of the disease itself. It was only four years after its first appearance in Europe that Gaspar Torella, physician to Pope Alexander VI, directed that the ointment then in use be reduced in strength, and soon after John de Vego, a Genoese, obtained brilliant results with a plaster which was a compound of mercury with aromatics.

Finally the belief obtained that these diseases, having a common origin in sexual contact, were alike in nature, which led to the abandonment of mercury as a specific. This was in the age of depletion, and blood-letting, starving, purging and sweating followed as a natural sequence. Nor were drugs abandoned; the new world offered numerous plants that were held in high repute among the Indians of the American Continent. Foremost of these stood guaiacum, which as early as 1508 was imported into Spain, where it soon attracted attention from the wonderful cures attributed to it. Ten years later its fame extended into Italy and Germany; special treatises were devoted to it, and guaiacum remained the recognized treatment for the "venereal disease" during the sixteenth century.

Then came sarsaparilla, which in turn threatened to supersede guaiacum and which to this day holds a high position in the popular mind as a "blood purifier" *par excellence*. But many cases, those we now know to be syphilitic, did not yield to this form of treatment, and mercury was added to the "decoction of the woods." It was in this way the decoction of Zittman became famous, which even now is extolled by some who think it a useful adjuvant in the treatment of constitutional syphilis.

During the seventeeth and eighteenth centuries there was no concensus of medical thought, consequently there was no stable or definite form of treatment. Some with retrospective bent adopted the "dry treatment of the Arabians," which aside from certain annoying observances, consisted in taking a mercurial pill morning and evening.[1]

In 1758 a report was made to the Royal Academy of Sciences of Stockholm entitled "The Lobelia, a Certain Remedy Against the Venereal Disease. Discovered by Peter Kalm."[2] In this quaint document the writer describes *in extenso* its employment by the Indians of North America, the facility with which the venereal disease was cured by it, how the secret was obtained from them, and finally a comparison in which is shown its advantages over the treatment by mercury.

With the beginning of the nineteenth century an important advancement had taken place. Benjamin Bell had eliminated gonnorrhœa from syphilis in 1793, and as if to clear the way for a more definite system of therapeutical investigation which now became possible, a new system of treatment was adopted; and it became by far more general than any other since the distinct features of the different venereal diseases have been lost sight of. At this time, too, a reaction was beginning to show itself against the heroic measures for the relief of disease in general. The new method was called the "Simple Treatment," and corresponded to our expectant treatment. As it was not known that the diseases, which at this time included all venereal sores, tended to recovery, the new treatment was hailed with enthusiasm. Nor was the enthusiasm ill-timed, for it taught that the disease was self-limited; that relapses which were attributed to certain drugs, notably mercury, were a feature of the disease itself, and that much smaller doses of mercury were capable of controlling syphilis than had previously been given.

A second great advancement was made in 1831, when Dr. Robert Williams advocated the iodide of potassium in the treatment of syphilis. The favorable report of its use by Ricord of Paris, and the publication by Wallace, of Dublin, in 1836, directed general attention to the drug, and it soon became extensively used.

When it became known that syphilis, if left to the natural eliminative forces of the body, became extinct in time, there was an attempt to hasten the *vis medicatrix naturæ* by stimulating the surface with blisters and the application of tartar emetic ointment. In the same direction, but by far the most important of these procedures was that of syphilization, which was conceived by Auzias in 1846, in the following way: In endeavoring to inoculate some of the lower animals with syphilis he obtained, as he supposed, a saturation or tolerance of the poison whereby the syphilized enjoyed immunity from further inoculation as well as from the ill effects that were known to follow the first. But experiments made so extensively by Boeck, of Sweden, and others, have relegated syphilization to the long list of abandoned methods which adorn the pages of medical history.

It was not, however, until Ricord began a

[1] Bumstead, Venereal Diseases, New York, 1866.

[2] Dr. Heller's Medical Notes, 1758.

systematic study of venereal sores at the Hôpital du Midi, in 1850, which enabled Bassereau two years later to announce to the world the doctrine of duality, that the modern epoch in the treatment of syphilis really began. From this time it has been separated from extraneous maladies which are unlike in nature and which differ essentially as to treatment. Note the result: Uniformity of method has succeeded the indefinite age of "new systems" and "new schools;" a uniformity, too, without the loss of individual effort to attain the highest end.

Thus systematized, the primary object in the treatment of syphilis, is to prevent systemic infection. With this in view the initial lesion has been cauterized after the manner of Ricord; it has been excised as practiced by Auspitz and Kolliker, but these procedures have failed to prevent the subsequent phenomena of syphilis. More recently Otis has advised the destruction, and where practical the excision of the initial lesion, not so much to prevent systemic infection as to destroy a focus of infection and as the quickest way of healing the sore.[3]

In most cases the application of mercury will cause the lesion to disappear, and except when accompanied by suppuration or necrosis, is the best means at our command. With suppuration iodoform is very extensively used; aristol is a new preparation free from the disagreeable odor of iodoform, and said to be even more efficacious; while antifebrine, in the writer's experience of three months, promises to supersede all other applications in this particular condition. But it is not with the primary sore that error is most liable to occur, for it usually disappears of its own accord; it is the systemic management, the persistent warfare against the syphilitic virus and its sequalæ that appear to be insufficiently understood by many who essay to treat the disease.

First, it is well to bear in mind that the virus may in time be eliminated by the natural forces of the body.

Second, the drug, and the only one, that is positively known to possess any curative influence over syphilis, is mercury. Under various disguises it has been given for centuries, and today its virtues are attributed to waters, and to nostrums innumerable. But a careful analysis enables us to affirm, that under its use the various manifestations of the disease disappear, relapses are less frequent, and finally the organism becomes free from the baneful influence and may be infected again. When to begin mercurial treatment is a point on which opinions differ. Hutchinson[4] claims for mercury the power of aborting the syphilitic processes; he therefore gives it with the first appearance of the primary sore. Lassar, in a personal interview, advocated its early use, "because if the disease does not prove to be syphilis it does no harm; whereas if it be specific the sooner mercury is given the better for the patient." Others again withhold the drug until secondary or systemic symptoms appear.

Doubtless the best course is to begin the use of mercury as soon as the diagnosis of syphilis is made. Previous to this the time may be profitably occupied by placing the patient under proper hygienic influences, and in the use of tonics such as iron, vegetable bitters and mineral acids, which will prove useful adjuvants to the subsequent course of mercury.

The special form of mercury that is advisable to use will depend largely on the individual requirements of a given case. Generally speaking, the protosalts are to be preferred to the bisalts at the beginning, as calomel, mercury with chalk, or the blue pill either alone or combined with iron, as in formula suggested by Bumstead many years ago.[5] In infantile syphilis, mercury with chalk is largely given in England, and has given the writer the best results. It was formerly thought to obtain a therapeutic effect of mercury it was necessary to produce salivation; we now know that the best results are gained by the continued use of the drug in quantities barely sufficient to produce tenderness of the gums.

To guard against the disagreeable complications which may occur in the mouth, the following simple rules should be observed: Before beginning the mercurial treatment, the teeth must receive attention at the hands of a dentist, and all decayed teeth either filled or removed. After eating they should be brushed with a soft brush to remove all particles of food, and if tenderness supervene a saturated solution of chlorate of potassium may be used as a mouth wash.

From the most remote times various methods have been employed to introduce mercury into the organism; plasters, inunctions, baths and its ingestion by the mouth, have all had their ardent advocates.

Fumigation, which was revived by Langston Parker of Birmingham, is an efficient way of giving it and free from some of the disagreeable features of other external methods. Of late, hypodermic or intermuscular injections have been extensively used, as advised by Scarenzio, of Milan, in 1864. Lewin has especially identified himself with this form of treatment, and it has been used almost exclusively in the extensive wards of the Charité Hospital at Berlin, for the last thirty years, which of itself is a sufficient guarantee of its value and the high estimate placed upon it by this most eminent syphilographer.

3 Clinical Lectures on Syphilis, by Fessenden N. Otis, N. Y., 1881.

4 London Lancet.

5 Venereal Diseases, New York, 1866.

But he is best able to treat syphilis who recognizes the special value of the several methods at his command. For reasons that are apparent to all, ingestion by the mouth is the one most in vogue, and when well borne there is none better. Frequently, however, gastric disturbances necessitate its discontinuance, when recourse must be had to one of the other ways of administration. The choice must be determined by the physical as well as the social statute of the patient.

Inunction is very largely used both in this country and in Europe, and forms the essential treatment at the numerous springs that have been vaunted for the cure of syphilis. The skin should be prepared for the absorption of mercury by taking a warm bath with soap, best at night. Then from half to a drachm of the strong ointment should be rubbed into the skin before the fire, either by the patient or an attendant with rubber gloves.

To those who can not subject themselves to this uncleanly process, fumigation may with equal efficacy be adopted. In fact the latter offers the best means of treatment when superficial lesions are present, as in the early syphilides. But many patients cannot carry out even this, and a method less liable to exposure must be used. Here is a field for hypodermic injections, which have but one objection so far as the writer's experience goes, and that is the pain, which continues three or four hours thereafter. Again when it is necessary to obtain a rapid effect of mercury, hypodermic injections afford a most efficient means. The formula that has given the writer the best results is the one used at the Poliklinik for skin and venereal diseases at Berlin:

℞. Hydrarg. bichlor., gr. ¼.
Sod. chlor., gr. ¼.
Aquae dest., ʒi. ♏.
Sig.—ʒi two or three times weekly.

I have never seen abscess or other inflammation follow this injection.

A fertile source of error lies in supplanting mercury by the iodine compounds. If one will take sufficient pains to investigate the treatment as carried on at the iodine springs at Halle, in Austria, one cannot but be impressed at the frequency with which the patients return after having been discharged free from all manifestations of the disease. This leads us to consider the rôle iodine plays in the management of syphilis.

After a certain though variable time the lesions, which have been superficial and evanescent, assume a more destructive and indolent form; new formations appear on the surface, others occur in the various structures within. This is known as the tertiary or stage of sequelæ. The tumors and destructive processes of this stage often endanger important organs or even life itself; these call for immediate relief. In iodine and its salts we have the best known agent for causing the rapid absorption of tissue enlargements which, as is well known, constitute the essential processes in lesions of tertiary syphilis. And clinical experience has demonstrated that these collections of granular tissue, whether in the stage of formation or decay, disappear and heal under its use. Nowhere is its action more marked than in lesions of the brain, and nowhere is it followed by more satisfactory results. In destructive processes of the upper air passages, too, its effect is almost marvelous.

The dose of the iodide of potassium, the preparation generally employed, varies greatly in different persons. I recall to mind a woman treated at the Blackfriars' Hospital for Skin Diseases, in London, who obtained the full benefit of the drug with a quarter of a grain, in fact a larger quantity produced iodism. Again, fifteen, thirty, sixty and even two hundred grains per diem is required to influence the disease. When large doses are required a combination of the iodide of ammonium and sodium, as recommended by Berkley Hill, is to be preferred.

The salts of iodine are best given dissolved in milk taken immediately before meals. When taken after eating water is the best vehicle, and it should be taken an hour after the meal. Generally better results follow the so-called mixed treatment, and as iodine should only be given late in the course of the disease, the persalts of mercury are selected, as in the following:

℞. Hydrarg. perchlor., gr. iij.
Kal. iod., ʒj.
Aquam add., ʒij. ♏.
Sig.—Ten drops in water after meals.

As soon as the special indications for iodine have disappeared it should be discontinued, and recourse had to mercury. It has been the writer's experience in difficult cases to find that the salts of potassium have almost invariably been given early in the disease. This leads to the conclusion, which is also entertained by others, that the salts of iodine not only are ineffective early in syphilis, but are positively harmful.

It is also important to know how long mercury should be continued. This will vary in different cases, for in some the disease may disappear in three months, while as many years is the allotted time, even under the most systematic treatment. As a rule, it should be continued at least six months after the last indication of systemic contamination has disappeared. After the continuous use of mercury has been withheld it is advisable to return to it at given periods for one or two years. It is my custom, when practical, to give two courses of six weeks each the first year, and one course the second year.

But there are cases of syphilis that are conspicuous exceptions so far as treatment is concerned. First, there are those associated with debilitating

conditions, such as tuberculosis, cancer and old age. Here the treatment must necessarily be varied, and oftentimes mercury plays an inconspicuous rôle. There are other cases, fortunately rare, over which mercury has no specific influence. On this account grave doubts may arise as to the correctness of the diagnosis. Three cases of this kind under observation were in young, robust subjects, which yielded finally to $\frac{1}{10}$th grain doses of the chloride of gold and sodium, taken from four to six times a day.

As accessories to medical treatment the patient should abstain from the use of tobacco, and be advised as to a regular course of living best suited to promote his physical welfare. Special attention should be given to the organs of elimination, and to facilitate their action water should be partaken of freely. A hot bath with soap should be taken every night, or a Turkish bath once or twice a week.

In this connection, and to emphasize the foregoing, a word about the treatment as carried on at the various springs that have taken such a hold on the popular mind, and which have become so much in vogue withal. The most celebrated establishment in Europe is doubtless that at Aix-la-Chapelle. It is claimed that the sulphur water at Aix stimulates the emunctories so that a larger quantity of mercury may be given and eliminated without causing ill effects. The principal advantage that these and other springs have over the treatment at home arises not so much from the water as from the care with which every detail of treatment is carried out. First, the diet is regulated so that a sufficient amount of nourishment is taken, and articles liable to cause disturbances of digestion, such as fruits and indigestible dishes, are withheld. The patient begins the day with a light breakfast, afterwards he walks if the weather be fine, and then takes a hot bath; after which a drachm of the strong mercurial ointment is rubbed into the skin by an attendant. He remains in a warm room about two hours and drinks during this time from one to two pints of sulphur water. He then walks, dines, and walks again, partakes of a light supper and goes early to bed. After this routine has been repeated daily for about six weeks, the lesions of syphilis have usually disappeared, and he is sent home, to return at the end of two months. The patient's attention is diverted from his malady by amusements of various kinds, so the syphilitic usually finds his stay at Aix-la-Chapelle both pleasant and profitable.

In this country the Hot Springs of Arkansas are frequented by those who think to get the disease "boiled out" of them. But it is quite generally recognized by syphilographers that the water has no specific effect on syphilis.

333 Prospect street.

PRIMARY PERIOSTITIS OF THE MASTOID.

Read before the Section of Otology and Laryngology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY H. v. WÜRDEMANN, M.D.,
OF MILWAUKEE, WIS.

My object in reporting these cases, beyond the fact that primary periostitis is rare, is to show the advisability of prompt action and radical treatment in all post-aural inflammations.

Case 1.—May 30, 1890, Mrs. M., æt. 30, a seamstress. Was convalescing from an attack of facial erysipelas, the last manifestations of which had apparently left four weeks previously. I was called in consultation by Dr. U. O. B. Wingate, on account of a painful swelling behind the left ear, which had been first observed about a week before. She had had fever for several days, and upon my examination the temperature was found to be 101°. The mastoidal region was quite boggy and exquisitely tender. The hearing distance was normal; an examination by the speculum and mirror did not even reveal congestion of the membrane. Likewise the Eustachian tubes and pharynx were apparently normal. On the same day I made a Wilde's incision, without anæsthesia, through the swollen area down to the bone. Neither pus nor necrosis were found, but the periosteum was apparently thickened. The wound was antiseptically dressed and allowed to heal from the bottom, its lips being stretched apart by strips of iodoform gauze. The operation relieved all the disagreeable symptoms immediately, the wound being healed in one week.

Case 2.—August 1, 1890. Mr. W., æt. 54, manager of large corporation. Had acute suppuration in the left ear following epidemic influenza, but no discharge had been observed for four months. Had been under the care of an aurist for a portion of that time. He consulted me about a red and tender swelling of the left mastoid, which had commenced two days before. Temperature by mouth, 100°. Examination of the left ear showed H. D. = voice 3 M. Could not hear whisper or watch. A large perforation of the membrana vibrans existed, but no pus was visible. Leeches were applied to the mastoid, and in three days the post-aural symptoms seemed to be entirely relieved. The edge of the drum head was pared with a probe-pointed knife, and touched with 10 per cent. argent nit. on several occasions, until on the 14th of the month the perforation had nearly closed. H. D. = watch at 3 cm.

On the next day he returned to me with fever, the mastoid being again red and tender. There was no discharge to be observed in the middle ear. Leeches were again applied, the mastoid painted with tinct. iod. and antiphlogistic treatment used

the ensuing five days. The patient was confined to his room, but on account of his dread of an operation none was even suggested until such became imperative. After a very painful night fluctuation was evident, and I made a Wilde's incision, without anæsthesia, liberating several drachms of pus, which spurted from the wound with considerable force. The periosteum was much thickened and detached from the bone. In the line of incision a soft spot, about the size of a dime, was seen. This was scraped out with a sharp spoon and a drainage tube inserted. The wound was packed with iodoform gauze and bandaged. The incision was made for diagnostic purposes, but I fully expected to have to trephine the mastoid.

To my surprise on again visiting the patient I found all the symptoms relieved by the operation, he having passed a comfortable night. On dressing the wound but little pus was found and the graver operation was postponed, particularly as no sinuses could be seen in the bone. On the next dressing the wound was dry, and from this time it was allowed to close. Ten days later it had healed over. By subsequent treatment the membrana tympani was restored, and on Oct. 1, H. D. by watch=100 cm. The patient has been apparently well since that time.

The operation was made on the first case in the stage of beginning inflammation before the formation of pus, but by the local abstraction of blood a further stage was aborted. In the second instance, the local inflammation was due to an extension of the original affection from the periosteum of the middle ear to that of the mastoid bone, and was not recognized until after pus had formed. In this case it is evident that only the covering of the mastoid and not its lining was involved. The process remained quiescent at some point in the periosteum for four months, then lighting up an active inflammation, the product of which was pus. In the first case the periostitis was undoubtedly primary, as the middle ear and canal had never been involved in an inflammatory process. In the second instance, upon first sight it seemed that the periosteum of the mastoid was the only part of the membrane involved, yet on account of the preëxisting middle ear disease we must class it as a sequel of the original affection. A remarkable event in the history of the second case was the renewal of the drum head, a process which seldom occurs in a person of such age.

Most cases showing these symptoms involve deeper structures than the periosteum and necessitate the graver operation of chiseling or trephining the mastoid. When a painful swelling appears in this region I am in favor of immediate incision, not only for the purpose of relieving the inflammatory symptoms by local blood-letting, or of releasing pus, but also as a means of diagnosis, as the incision may easily be extended for the operation of trephining. Wilde's incision in itself is void of danger, easy of accomplishment, and may be relied upon for relieving local inflammation by a thorough depletion of the blood vessels.

805 Grand Avenue.

FRIEDRICH'S ATAXIA; ITS RELATION TO THE CONDUCTING PATHS IN THE SPINAL CORD.

BY DAVID INGLIS, M.D.,
OF DETROIT, MICH.

At the Congress of American Physicians and Surgeons, Dr. David Inglis, of Detroit, read a paper upon the above subject before the American Neurological Association.

He reports in brief, a case of Friedrich's ataxia in a boy of six years of age, in which the symptoms conformed accurately to Friedrich's own summary of the characters of the disease, viz.: "Impairment in the combination and harmony of movements developing gradually and spreading from the lower to the upper half of the body, and always involving finally the organs of speech; sensibility and the functions of the special senses and of the brain being intact; paralysis of the sphincters and trophic disturbances are absent; less common phenomena are curvature of the spine, sensations of vertigo and nystagmus. From a clinical point of view we must regard the disease as a progressive paralysis of the faculty of combination of movements."

A review of the thirteen recorded autopsies shows a practical agreement that the pathological condition underlying the disease consists in a progressive sclerosis which always affects the column of Gall, the column of Burdach also, but not so completely, the direct cerebellar tracts with Clarke's column in most cases and the crossed pyramidal tract in some cases, but the sclerosis is here not so intense. We have to deal with a disease of the tracts which degenerate upward, which are usually looked upon as centripetal and as conveying sensory impulses.

Author contends that the symptoms of Friedrich's ataxia afford a demonstration that these tracts do not convey sensory impulses upward, for sensation is not impaired, but that they are the main tracts for the conveyance of coördinated motor impulses downwards; that their anatomical relations with the medulla, cerebellum and mid-brain, as well as the facts of Friedrich's disease agree in showing them to act to coördinate motor impulses of the mid-brain, cerebellum and higher and lower levels of the cord.

The facts of Embryology strengthen this theory; at the end of the fœtal life, at a time when the pyramidal tracts are undeveloped, the posterior

columns and direct cerebullar tracts are complete. Their function evidently begins at once after birth. When we remember that the new-born infant is characterized, not by voluntary control of its muscles, not by accuracy of sense perception, but by an extensive coördination of involuntary motor functions, the conclusion is easy, that these, the only tracts fully developed at birth, subserve these purposes.

The direction of Wallerian degeneration is not necessarily the same as the direction of normal physiological impulses in any given nerve tract.

IMPROVED EAR ELECTRODES.

BY SETH S. BISHOP, M.D.,
OF CHICAGO.

These electrodes consist of two metallic cones covered with chamois, and held in position for treatment by an elastic ribbon buckled around the head.

The tips of the cones are moistened before inserting them in the external auditory canal. In order to keep them clean, it is well to place a small covering of cotton, moistened with warm water, over the tips of the cones while in use.

It is a simple matter to adjust the cones to heads of any size by having one or two extra apertures in the ribbon, through which one of the cones can be easily passed. Or a second buckle can be put between the cones, at the back of the head, in order to alter the distance.

The ribbon should never be buckled so firmly as to occasion uncomfortable pressure.

The advantages of these electrodes over the old ones commonly employed for ear treatment, are the following:

1. The electric current can be concentrated as much as is possible in the ears, instead of being diffused over the side of the head and face.

2. There is no necessity for filling the auditory canal with water, and thus macerating and relaxing the drum head.

3. The patient is relieved of the irksomeness of holding the electrodes in position, a freedom fully appreciated by those who have had experience in the old way. With the cones in position, the patient can take a comfortable treatment while looking over the morning paper or illustrated magazine. This converts a treatment that was formerly a bore into a comparative luxury.

Chas. Truax, Greene and Co., made these for me.

70 State St.

BOOK REVIEWS.

DISEASES OF THE NASAL ORGANS AND NASO-PHARYNX. By WHITFIELD WARD, A.M. M.D.

This little work from the house of Putnam's Sons, is intended for the student and general practitioner, rather than for the specialist, and admirably fulfills its mission. A short practical treatise upon rhinology is in demand. Dr. Ward has certainly met the requirements of the general practitioners in an admirable manner.

TRANSACTIONS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION. It certainly cannot be denied that there is a medical "New South." The professional ranks of the South contain many of our ablest men. In the case of those Southerners who practice in the large cities, excellent contributions to medical progress should be expected. Many of the best contributions to current medical literature are from the pens of southern doctors who do laborious country practice. The best representive society in America to-day is undoubtedly the Southern Surgical Association, members of which have contributed to the proceedings of the South Carolina Society. The present volume of transactions contains several classical and interesting articles. The papers by Dr. Kollock on abdominal section, R. A. Kinloch on drainage of wounds, and of Dr. M. P. Ravenal on general anæsthesia are especially worthy of commendation.

ESSENTIALS OF ANATOMY AND MANUAL OF PRACTICAL DISSECTION. By CHAS. B. NANCREDE, M.D. Professor of Surgery in the University of Michigan.

This is the third edition of Dr. Nancrede's work, and has been improved by the addition of osteological plates. The colored plates of anatomical studies in this book are excellent, the publisher having spared no pains or expense in their preparation.

Professor Nancrede's reputation is such that it is hardly necessary to say that the subject matter of the work is judiciously selected and arranged, and fully up to date. The book is published by W. B. Saunders.

MEMORIALS TO THE LATE DR. LEIDY.—The friends of the late Professor Joseph Leidy, of the University of Pennsylvania, are desirous of raising a memorial fund of $100,000 to perpetuate the name of Leidy in that institution. One-half of that sum will go to the foundation of a museum, to be named after him; also an equal amount, if it can be promptly accumulated, will be devoted to the establishment of a Leidy chair of anatomy.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.
PER ANNUM, IN ADVANCE $5.00
SINGLE COPIES . . . . . 10 CENTS.

Subscriptions may begin at any time and be sent to
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE.,
CHICAGO, ILLINOIS.

All members of the Association should send their Annual *Dues* to the *Treasurer*, Richard J. Dunglison, M.D., Lock Box 1274, Philadelphia, Pa.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly JOURNAL of the Association will be forwarded regularly.

SATURDAY, OCTOBER 31, 1891.

MEDICAL CRISIS IN CHINA: THE FIELD FOR MEDICINE IN THE ORIENT.

In no half-civilized country of the Orient has medical missionary effort been expended with more liberality than in China. And yet to-day the feeling of insecurity is such that it would not be at all surprising if all that has been done should be wiped out in a day. A wave of rebellion and superstition is reported to be rolling over that vast empire, not wholly sparing the more enlightened and progressive sea-board cities. The Chinese mob, it is said, is incited against American and British missions by a belief that these foreigners use the eyes and other organs of Chinese children in the manufacture of medicines, and that these children are stolen or bought for pharmacal purposes. Denials of prejudices such as these are vain. In the mind of more than one European official resident in China, the only remedy for the present dangerous tension will be found in the throwing open to an official inspection by the Chinese government, the doors of all the hospitals, asylums and schools supported by foreign societies. This has not hitherto been the system of management, but it is recommended as an unobjectionable and feasible manner of counteracting the false reports that are spread by the leaders of the mob element. Wherever the influence of educated medical men has been felt personally by the Chinese, the individual results—and from them spreading out in wider circles—have been markedly beneficial. Both the Chinese and the foreigners have been benefited by the good done by, and the sentiment created around the medical missions, hospitals, and schools. To quote an expression from a recent address of DR. STEPHEN SMITH of New York, "it is said that China was opened up with the point of the lancet," by the veteran DR. PETER PARKER, late of Canton. In some heathen lands the multitudes throng around the medical missions, and they have to be restrained from offering sacrifice to the missionaries, as in the days of ST. PAUL. The missionary may be respected, but the medical missionary is almost an object of worship. His cures and surgical operations are miracles to a people whose knowledge of their bodies is limited to their integument, teeth and tongue, and who believe, after centuries of opportunity to know better, that a man's brains are located in his stomach. Korea, a "hermit-nation" until a few years ago, was opened by the probe of military surgery in the hand of a missionary doctor, DR. ALLEN, who happened to be on hand shortly after a battle or *emeute*. Then too, the kindly treatment accorded to the sick in the hospitals is so diametrically opposed to the cruelties of native practice, that these hospitals become the safest spots in their cities. An English consul at Canton, during threatening times, made this memorable remark: "The hospital is safer than a gunboat." Almost without exception witchcraft, mingled with cruelty, is the medical system of barbarous peoples—and as an extreme example, and one not very well known, we may mention the treatment accorded to twin-births in Cameroons, West Africa; where under the sanction of the witch-doctors, all multiple births are destroyed before a day is over, to do away with the ill-luck they are supposed to bring, and in some tribes the mother is put to death, and in some others both of the misguided parents are put out of the way along with their progeny—so that it is no exaggeration to say that the least skilled medical missionary who ever went among the heathen has more of the godlike and worship-worthy about him than the best god the tribes he visits can possibly produce. This is seen and appreciated in an espe-

cial manner in those lands where the foreign doctors extend their care to the lunatic and forlorn leper; the treatment of insanity among uncivilized peoples has been summed up under three heads, either neglect with starvation, death by torture, or burial while yet alive. What wonder, then, if these peoples mistake the educated physician for a god! One of the names adopted among the Chinese to describe a medical mission is "The Universal Benevolent Healing Office," and many a spontaneous gift finds its way from mandarin and merchant into the coffers of the hospital.

The Rev. Dr. MOFFAT, LIVINGSTONE'S father-in-law, has left on record a striking saying as to the value of a skilful medical man in foreign fields to the effect that "A medical missionary is a missionary and a half, or rather he is a double missionary." But now-a-days the converse is sometimes stated as the best method to insure success in the foreign fields, namely, medical missionaries should be sent forth not singly, but in pairs; in India especially, it has been found advantageous to have a female physician as one of the staff. The physician is almost always the first to gain a footing in any field that is entirely new. The sick heathen can appreciate a good dose of medicine even while as yet the language of his doctor is only dimly understood. And we believe it was the great LIVINGSTONE himself who many years ago, remarked that the best pioneer in a new and rude country was a well-filled medicine chest. MACKAY, of Uganda, who both administered medicine and did some surgery, often felt the need of a better acquaintance with the healing art and the companionship of a fully qualified medical comrade. So that the field of medicine is the world, the dark depths of Africa as well as the teeming fields of Asia.

CÆSAREAN SECTION TWICE PERFORMED IN THE SAME WOMEN. FOUR RECOVERIES.

One woman in France and another in Pennsylvania have, early in the current year, undergone Cæsarean section a second time. In other words, there have been four operations equally divided between two individuals; also four recoveries. To treat of the case of the foreign lady first: She was a resident of Pontoise, aged 24, the patient of a surgeon named CRIMAIL. She was not rachitic, but had a pelvis that was uniformly contracted. Her first Cæsarean section was done in October, 1888, and the second in February last. In order to provide against the possibility of another pregnancy, the surgeon "unsexed" his patient by placing—during the second operation—a double ligature upon each Fallopian tube, a short distance from the uterus, and then divided the tubes between the ligatures. The uterus was then sutured, dressings treated with iodoform were used, and a good recovery resulted. The American case occurred in the practice of Dr. CHARLES P. NOBLE, of Philadelphia, and was reported by him to the Gynecological Society of Baltimore, in March, 1891. In this case DR. HOWARD A. KELLY performed the first section. The uterine wound incompletely healed, and there remained a fistula from the cavity of the uterus to and through the abdominal wall. Notwithstanding this outlet, conception again took place. For several weeks the amniotic bag presented at the opening, so that during that time there was nothing between the fœtus and the outside world but the thin amniotic sac. This sac ruptured at the thirty-third week. The patient had a generally contracted pelvis, and there was besides a mass of fibrous tissue behind the cervix, which had been left by the previous Cæsarean labor. If the patient had been left to Nature, the fœtus must have been expelled per fistulam and not per vaginam. In performing the second operation, the fistula was enlarged to incision from below upwards; the peritoneal cavity was opened in order to obtain the necessary amount of room. A living fœtus was extracted. The patient passed through this unique experience with satisfactory results as to the healing of the wounds; she is now in good health. DR. NOBLE does not approve of the performance of any subsidiary operations for the purpose of preventing future pregnancies, as was done in the case of the French surgeon CRIMAIL; he would do nothing to prolong the section, and the deligation of the Fallopian tubes is objectionable, from a theoretical standpoint, as a possible cause for salpingitis. So far as is known to him, the ligature had thus been used only twice. DR. NOBLE further stated that there had been twelve Cæsarean operations done in Philadelphia in the last four years, and ten mothers had recovered. One of the mothers who died had pneumonia at the time of the operation, and

in the other case of death there was a complication in the fact that the surgeon at the same time removed a fibroid tumor.

ANDROLOGY AS A SPECIALTY.

The first step in the right direction as far as the differentiation of the department of genito-urinary diseases into a separate and distinct specialty, was the formation of the Section of Andrology in the Congress of American Physicians and Surgeons. Much adverse criticism and some ridicule were excited by the nomenclature which the American Association of Genito-Urinary Surgeons constituting this Section finally adopted. But the American Andrological Association—now an important integral part of the Congress—is a complete success, and has demonstrated its ability to place the specialty of andrology upon as high a plane as that occupied by gynecology, ophthalmology, or dermatology. The parallelism between andrology and gynecology is especially well marked. The exigencies of general practice, which finally demanded the establishment of a department of surgery devoted exclusively to the study and treatment of diseases peculiar to women, are well recognized. The crude and imperfect work—and, we were going to say, surgical barbarity—characterizing this highly respectable special branch of surgical art prior to its differentiation into a specialty, are difficult to realize in the light of the magnificent work that is being done in this department at the present day. There is no question but that those affections peculiar to the male have been more neglected, less fully understood, and more frequently treated "for what there is in it," rather than a desire to benefit the patient, than was ever true of the diseases of women. We believe that to-day fully as barbarous, slipshod, and dishonest work is being done in this class of affections as was ever to be observed in gynic disease. Diseases of men have ever been the fruitful field of the quack and charlatan, and it must be confessed, that of certain physicians who in other directions, perhaps, may exhibit comparative honesty of purpose and practical skill. They have been the fruitful soil wherein the noxious principles of professional prejudice and popular ignorance have thrived and waxed luxuriant in the development of a crop of error, quackish pretense, and incompetent surgery. Fostered by the indifference and neglect of the respectable physician, the practices of the quack have flourished like a poisonous fungus at the roots of the mighty oak of medical science. It is high time that a special association for the study of andrology should be encouraged by the sentiment of the profession at large. The time will come when the new departure in specialistic practice and nomenclature will be looked upon with quite as much favor as is gynecology to-day.

But andrology will never occupy the position it deserves until the average doctor ceases to think himself competent to treat the most complicated case of genito-urinary disease—as long as the patient's money lasts. There is no part of the body that so quickly and painfully resents incompetency and tinkering as does the genito-urinary apparatus of the male.

PHYSIOLOGY OF VOMITING.

There is no more common symptom of disease, with the possible exception of pain, than vomiting. It occurs in such a variety of conditions both general and local, and is, withal of such importance in the differential diagnosis of many morbid conditions, that clear ideas of the mechanism of its production are a desideratum. Our standard works on physiology present some rather wide discrepancies. FOSTER says that the varying impulses presented in the act of vomiting may best be considered as starting from a centre located in the medulla, near the respiratory centre. LANDOIS and STERLING state that the centre for the movements concerned in vomiting lie in the medulla oblongata. MILLS says that the vomiting centre is usually located in the medulla; he believes, however, that the doctrine of centres in its present form, especially with such precise limitations physiologically and anatomically, cannot be maintained. In this matter, he thinks we have been overlooking the connection of parts while occupied with defining their limits, and it is more than likely that our explanations of the entire process are quite inadequate to unravel its real complexity. HLASKO (Inaug. Dis. Dorpat., 1887) after a large number of experiments, came to the conclusion that there was no centre in the bulb, but that contractions of the cardia were determined by impulses pro-

ceeding from the corpora quadrigemina, the pathway was by the vagus and cord, especially the former. The efferent pathway for contraction of the stomach walls is wholly by the cord. In none of his experiments did any other portion of the brain determine contraction of the stomach excepting the corpora quadrigemina. An inhibitory centre for the cardia was found near the point where the nucleus caudatus joins the lenticular nucleus, not far from the anterior commissure. This dilator nerve forms part of the pneumogastric. It is well known that section of both vagi does not always suppress vomiting, though it makes the act difficult and imperfect. The experiments of HLASKO show that vomiting is absolutely stopped after the destruction of the corpora.

In view of the conflicting results obtained by experiments and the varying views of standard writers, it is too soon to formulate a theory regarding this one of the commonest but least understood of all the ordinary reflexes. Until the physiology of this function is better understood, it is folly to dogmatize regarding those complex disorders, sea-sickness and the vomiting of pregnancy.

VEGETARIANISM.

Numerous experiments have shown that a diet limited to certain articles of food is sure to result in the production of pathological lesions, the result of the malnutrition. These lesions show themselves early or late, according to the foods abstained from, and are tolerably characteristic for some foods or classes of foods. It is to be regretted that our observations have not been sufficiently extensive or definite to foretell accurately what particular symptoms will follow a particular starvation. It is well established that cattle deprived of common salt develop rough, shaggy coats, and later the hair drops out in spots; also that vegetable acid starvation results in scorbutus. The valuable observations of SALISBURY, made some years ago, have not yet met, at the hands of the profession, with the recognition that they deserve.

A note by DR. ALANUS, which has been going the rounds of the journals, has revived an old observation of one of the results of an exclusive vegetable diet, which should be borne in mind. ALANUS had lived for a long time as a vegetarian, without feeling any better or worse than he had when using a mixed diet, when suddenly, although still under 40, he discovered that atheromatous degeneration was beginning to show itself, being particularly noticeable in the radial and temporal arteries. GUBLER had long ago shown that vegetable food, being richer in mineral salts than animal food, introduces more of these substances into the blood than animal food does, and that its exclusive use was followed by calcareous degeneration of the arteries. RAYMOND has observed numerous cases of atheroma in a monastery of vegetarian friars, amongst others, that of the prior, a man of 32, whose arteries were already considerably indurated. From Bombay and Calcutta, where many people live exclusively on rice, TREILLE, a naval surgeon, has reported many cases of atheromatous degeneration.

The importance of such observations does not lie in their showing the insufficiency of a limited diet, as that is already well known and accepted, but in the indications for feeding which they give in similar cases which develop irrespective of the diet.

THE INFLUENCE OF ONE FEVER ON ANOTHER.

Under this caption, DR. H. NOBLE JOYNT, of the Bradford Fever Hospital, gives some observations which he has made in the course of his wide experience in fever cases.[1] He remarks: "It is the daily experience, and indeed the bane, of every fever hospital physician to see a patient suffering from one fever, develop a second which has been incubating in his system before admission; or when convalescent, contract a fever from some other patient in spite of all precautions." Thus he has seen "mulberry rash of typhus, and the rose spots of enteric well developed at the same time; the erythema of scarlatina forming a brilliant ground for the vesicles of varicella, the dark maculæ of measles and rötheln, and the rose spots of enteric."

Such observations are by no means new, but it has been the custom to deny that they are due to the presence of two distinct diseases in the individual, at the same time, but to assume that these appearances are more apparent than real, and

[1] Practitioner, XLVII, 261.

merely accidental manifestations of the original poison.

The dictum that but one infectious disease can exist in an individual at a time, has secured an almost universal acceptance, and has even dominated workers in original investigation, and yet it must be admitted that it stands only on clinical ground, and therefore is no more worthy of credence than the opposite view.

Now that it has been established that diphtheria is a local process, which produces its systemic effects through the poisons elaborated at the seat of the lesion, and absorbed therefrom, there can certainly be no objection, even theoretical, to the view of the old clinicians that diphtheria may be engrafted upon any of the infectious diseases.

Certainly the chemical poisons of diphtheria can be absorbed from a mucous surface by a patient affected with an infectious disease, as readily as the medicines administered can be absorbed, and there is no reason why their superadded effects should not be exhibited. When it has been shown satisfactorily just how many and what microörganisms can produce the disease or diseases known clinically as diphtheria, it will be time enough to determine whether the false membranes developed in the throat in scarlatina, typhoid and other diseases, are truly diphtheritic or not.

Why are not many of the symptoms of typhoid fever due to the absorption of poisons from the intestinal canal, intoxication complicating infection?

Concurrent varicella and scarlatina has recently received some attention at the hands of the French.

We have recently seen a child, who in the course of whooping cough, developed a typical enteric fever, during which the characteristic whoop ceased, to return on the cessation of the fever.

It is admitted that clinical evidence alone is not sufficient to establish the concurrence of two diseases, neither is it sufficient to disprove their concurrence. The apparent concurrence of two infectious diseases is not common, but to deny that such an actual concurrence is impossible, is going farther than exact observation warrants.

SOCIETY PROCEEDINGS.

Medical Society of Virginia.

The twenty-second annual session was held in Lynchburg, Va., October 6 to 8. Attendance about 200, including the following from other States: Drs. T. D. Crothers, Hartford, Conn.; A. M. Phelps, New York City; Chas. H. Shepard, Brooklyn; B. A. Watson, Jersey City; Wharton Sinkler, Philadelphia; H. P. C. Wilson, Thomas A. Ashby and J. J. Chisolm, Baltimore; I. S. Stone and Jos. Tabor Johnson, Washington, D. C.; Geo. H. Zimmerman, of Cranbery, N. C.; Geo. T. Vaughan, Surgeon U. S. Marine Hospital Service, at Evansville, Ind.

The President, Dr. Wm. W. Parker, of Richmond, Va., presided, and delivered a most unique, instructive and interesting *Presidential Address* on St. Luke and Jenner as physicians—showing their exemplary characters and pointing out the incalculable good they had done medical science, for which we in this day forget to give them credit.

A large and appreciative audience of ladies and gentlemen, beside members of the Society, was present on the first night to hear the address to the public and profession by Dr. C. M. Blackford, Jr., of Lynchburg, Va., on "*Medical Education as it Was; as it Is; and as it Should Be.*"

This address was followed by a most appropriate paper by Dr. Rawley W. Martin, of Chatham, Va., (who had been specially requested by the State Board of Medical Examiners to prepare it) on the

MISSION AND METHODS OF THE MEDICAL EXAMINING BOARD OF VIRGINIA.

The wonderful effects of the operations of this Board since its organization, January 1st, 1885, upon the education and tone of the Virginia profession; its now universally recognized benefits to the people of the State; its influence in leading colleges outside as well as in the State to do better work, and to require a better standard for graduation, etc., were all commented on. And the remainder of the address detailed the methods adopted by the Virginia Board in conducting examinations, etc. It is a valuable paper for general use.

The committee on examination of essays presented in competition for Dr. Hunter McGuire's prize of $100, on the subject of "Pyelo-Nephritis," reported that in their opinion neither of the essays presented was entitled to the prize.

The subject for the prize essay next year is *Tetanus*.

Hereafter, in lieu of the usual reports on advances in the several departments of Medical Sciences, the president is to appoint fifteen Fellows, each of whom is to prepare an essay or lec-

ture on some subject of his selection, to be announced in ninety days after adjournment of the session.

After the routine work of the morning session of the second day, Dr. William W. Parker, of Richmond, Va., delivered the "President's Address," which was unique, classic, instructive and most entertaining. It was devoted mostly to a review of the lives of St. Luke and Jenner as model men and great physicians, and showed how much of good to humanity had resulted from their labors as doctors.

ACUTE AND CHRONIC DYSENTERY,

Was the subject for general discussion. The leader, Dr. P. B. Green, of Wytheville, Va., briefly reviewed the literature of the causes, symptoms and pathology of the disease, but devoted the bulk of his paper to the questions of treatment. The "laxative and opium plan," he said has pretty generally fallen into disuse. The "antiphlogostic plan" is admissible only in sthenic cases, which are extremely rare. The "continuous use of large doses of calomel" seems unnecessary. When such doses are "followed by salines," depression is apt to follow. However, one or two decided doses of calomel are indicated if the condition of the patient is "bilious." "The saline laxative plan" is undoubtedly beneficial in the earlier stages of the catarrhal variety. "Castor oil in repeated doses" has warm advocates. The "opium treatment" to the stage of semi-narcosis is unsafe. "Ipecac treatment" is extravagantly commended by many. It is best to administer it in wafers or capsules. Dr. Green, however, has not used ipecac with very satisfactory results. "The antiseptic mode" promises more than any other. Among agents used are iodoform, salicylic acid, cupric sulphate, boric acid, carbon-bisulphide water, creosote, naphthalin, bichloride of mercury, salicylate of sodium, resorcin, etc. Sodium salicylate seems to be the preferred. Beaumetz gives

℞. Carbon bisulphide, ʒvi.
Water, ℥xvi.
Spts. peppermint, gtt. xxx.—Mix.

Shake well; let settle. Then take 8 to 10 tablespoonfuls, diluted with milk or water, during the day. If the disease continues a week without improvement, the suppurative stage has probably set in. Then an emulsion of turpentine, such as the following, has acted well in his hands:

℞. Tinct. of opium, ʒiij-iv.
Oil of turpentine, ʒiiiss.
Gum Arabic, (powdered).
White sugar, āā ℥ss.
Camphor water, ℥iij. Mix.
S. Teaspoonful every four to six hours.

Astringents may now be required, such as drugs containing tannic or gallic acid, carbolic acid, acetate of lead, sulphate or chloride of zinc, and nitrate of silver. If severe hæmorrhage sets in, he uses ergotole or ergot hypodermically. "Treatment by rectal injections" has invariably proved successful in adult cases in his hands, and in most cases of children, except infants. He prefers a fountain syringe, filled with a warm solution of mercuric bichloride (1 : 10,000 up to 1 :3,000) every six to twelve hours. Immediately after this injection into the bowel, let patient evacuate the bowels, and introduce a suppository of opium. Among other antiseptics so used are salol, Listerine, fluid extract of hydrastis, salicylic acid, the salicylates, etc.

In a paper on the subject by Dr. Wm. J. Crittenden, of Unionville, Va., the frequency of dysentery in both the Union and Confederate armies during the Civil War is commented upon. Along the Pacific coast, its frequency is stated to be in the proportion of 1 : 1,000 deaths from all causes; on the Atlantic coast, 10 : 1,000; along the Mississippi River section, 21 : 1,000. Warm climates furnish the soil for the dysenteric germ. After describing the anatomical and clinical histories of the disease, he spoke of the complications, such as peritonitis, perityphlitis, intussusception, intestinal perforation, liver troubles, etc. He described the various modes of treatment, prophylactic and curative.

Dr. Bedford Brown, of Alexandria, Va., followed with a paper on

DYSENTERY VIEWED AS A SEPTIC DISEASE, AND TREATED PRINCIPALLY BY ANTISEPTICS.

Leaving out of consideration those cases due simply to irritants, etc., he spoke of the septic forms, heretofore designated as malignant, camp, jail, famine, typhoidal dysentery, etc. Foul conditions of food, water or air are the common causes of this septicæmic form. Its mortality ranges from 75 to 25 per cent. Absolute and continuous cleanliness of the drinking-water, of food, and of the air breathed, is the preventive. In the septic form of dysentery, begin treatment with calomel as a cathartic, followed by Epsom salts to thoroughly cleanse the alimentary canal. Then use injections of carbolic acid ʒij in 2 or more pints of water. This may be followed by an anodyne enema of a drachm of laudunum. Then

℞. Aromatic sulphuric acid, ʒij.
Sulphate of magnesia, ℥ss.
Deodorized tincture of opium, ʒij.
Syrup of orange peel, ℥j.
Peppermint water, ℥iij.
Water, ℥ij. Mix.
S. Tablespoonful every three hours.

An occasional full dose of Epsom salts relieves engorgement and corrects the secretions. A more decided antiseptic course is required in severer cases—such as naphthalin, salol and phenacetin, āā gr. v, every three hours, and irrigation of the

bowel twice daily with creolin. If adynamia supervenes, with intensely offensive bloody discharges, with mucus, pus, sloughs, etc., hydrogen peroxide—an ounce or two in a pint of water as an injection—is the best antiseptic, or ichthyol dissolved in mucilage. Sustaining diet must be used. If collapse threatens, give $\frac{1}{100}$ gr. each of atropia, strychnia and nitro-glycerine, beside hypodermics of caffeine. In malignant hæmorrhagic forms:

℞ Opium, gr. ss.
Tannin, gr. ij.
Strychnia sulphate, gr. one-fiftieth.
Iodoform, gr. j.
Creosote, gtt. j. Mix.

S. Repeat every two or three hours. Also give turpentine, ʒss, in a pint of emulsion.

Chronic dysentery should be considered as due to septic wounds. The septic fæcal matter constantly passing over the wounded surface keeps up the condition. Use simple tepid water irrigations; then use, twice daily, ½ to 1 gallon of solution of hydrogen peroxide, creolin or ichthyol. A soft rubber tube, about 15 inches long, passed into the colon, is the most efficient means of irrigation.

Dr. J. Edgar Chancellor, of the University of Virginia, instanced some remarkable cures of chronic dysentery by the use of the Rockbridge alum springs water.

Dr. R. I. Hicks, of Warrenton, Va., had not succeeded with antiseptic irrigations. At the same time, locking up the bowels with opium had been fatal, although opium is useful to provoke sleep, especially if associated with a suitable laxative. With such treatment, he had thirty-three successive cures; whereas of fifteen cases treated by irrigations, he had one death.

Dr. D. A Langhorne, of Lynchburg, Va., agreed with Dr. Hicks about irrigation. The calomel purgative treatment is too risky, and opium is positively harmful. Rockbridge alum springs water is especially valuable in those chronic cases having pale, flabby tongue, etc.

Other speakers were Drs. R. M. Slaughter, of Theological Seminary; W. L. Robinson, of Danville; H. M. Nash, of Norfolk; J. S. Apperson, of Marion; J. E. Anderson, of North Danville—all of Virginia.

During the afternoon, the following elections for the ensuing annual term were made: President—Dr. H. Gray Latham, of Lynchburg; Vice-Presidents—Drs. J. R. Gildersleeve, of Tazewell C. H., Hugh Stockdell, of Petersburg, and J. B. Moore, of Aylett's; Secretary—Dr. Landon B. Edwards, of Richmond; Corresponding Secretary—Dr. J. F. Winn, of Richmond; Treasurer—Dr. Richard T. Styll, of Hollins; Chairman Executive Committee—Dr. Hunter McGuire, of Richmond; Chairman Committee on Applicants for Fellowship—Dr. Wm. D. Turner, Fergusson's Wharf, Isle of Wight Co.; to fill vacancies on Medical Examining Board of Virginia—Drs. Kent Black, of Blacksburg, and Wm. S. Christian, of Urbanna. To deliver "Address to Public and Profession, 1892"—Dr. Jacob Michaux, of Richmond. Subject for General Discussion, 1892—"Vertigo;" Leader—Dr. E. T. Brady, of Marion. Luray is place of session, 1892, during second week in September.

Preceding elections, invited guest Dr. A. M. Phelps, of New York City, operated on two cases of club-foot, and afterwards made a clinical lecture on the subject. His operation on the boy of about 13 years, for a congenital and very disfiguring talipes equino-varus, excited special commendations, as being a most difficult operation well performed, etc.

During the night's session, invited guest Dr. Charles H. Shepard, of Brooklyn, N. Y., read a paper on

THE TURKISH BATH IN THE TREATMENT OF DISEASE.

The essential principle involved in this bath is "the application of heat in varying temperatures," to quicken circulation and excite perspiration. Manipulation or massage follows the bath. "The Turkish bath is a prime element in preventive medicine," and belongs in the first rank of remedies for rheumatism, malarial troubles, etc. It substitutes climatic influences when they are needed—removing congestion, inflammation, equalizes circulation, and imparts activity to the secretory organs. The paper was favorably discussed by Drs. T. D. Crothers, of Hartford; L. G. Pedigo, of Roanoke; E. T. Brady, of Marion; Geo. W. Hubble, of Chilhowie, etc.

Dr. S. J. Baker, of Bedford City, Va., read a paper on *Pharmacy and its Practical Relations to the Profession*, its scope being set forth in the title.

During Thursday morning's session, Dr. H. P. C. Wilson, of Baltimore, fraternal delegate, etc., read a paper on

RETRO-DISPLACEMENTS OF THE UTERUS.

Retroflection is the most common, and sooner or later leads to serious symptoms in other organs, as of bladder, stomach, heart, brain disease, etc. Removal of the chronic retroflection does not promptly relieve the symptoms referred to. Judicial constitutional treatment as well as treatment of the organs which have suffered are essential. To diagnose retro-displacements, empty the lower bowel; pass *left* index finger per vaginam, knuckles down to depress perineum which permits the finger to reach higher. The woman being on her back on a table, with thighs flexed on her abdomen, and legs on thighs, the finger can usually determine whether or not the fundus uteri is back in the hollow of the sacrum. Sim's left lateral position is the best for the use of the probe. Introduce Sim's speculum; steady cervix with tenaculum, and introduce the probe

to determine the amount of fixation, the direction of the uterine canal, etc. If the retro-displaced uterus be of recent duration and movable, it can usually be easily replaced and held in position with a comfortable pessary. In the after treatment, wash out the vagina daily with hot water, and also see that the bowels are opened every day. Constipation is the rule in all these cases. So that he has almost come to the conclusion that the end of woman is to serve God, and keep her bowels open. If the pessary is uncomfortable, remove it at once; but if comfortable, do not remove it until long after its use is deemed unnecessary. When then removed, substitute a smaller one, until the patient can do without any. The pessary should be long enough and sufficiently curved to raise the fundus uteri out of the sacral hollow, and carry it forward to its natural position: but it should not be so wide as to put the lateral vaginal walls on the stretch. When irritability and sensitiveness prevent complete restoration, replace the womb only partially, and hold it so until the wearing off sensitiveness permits its being more perfectly replaced. A pessary is usually required for two or three years. If the vagina chafes or becomes unduly irritated, remove the pessary for the time, introduce Sim's speculum, and touch the abrasion with a weak solution (1:12) of Monsel's solution and glycerine, and use a fresh pad of aseptic lamb's wool till the pessary is re-inserted. Hodges' or Smith's bow pessary are best for retro-displacements.

Invited guest, Dr. Joseph Taber Johnson, of Washington, D. C., remarked that Dr. Wilson's paper was a capital one in all its descriptions. The greatest caution should be urged about the use of the pessary if inflammation exists. If such a condition as a fibroid in the posterior wall causes retro-displacement, of course the pessary will not be sufficient—surgical aid must be summoned. To use the probe simply to determine the course of the uterine canal is harmful in many cases. The womb is intended to be a movable organ; hence to apply a pessary that fixes it in one position will result in injury.

Dr. L. Lankford, of Norfolk, Va., said that in some cases of seemingly extensive and firmly adherent retro displaced uteri, he had done good by first swabbing out the vagina with mercuric bichloride solution (1:4000), and then applying a tampon (about once in five days) of selected lamb's wool wet with the same solution. If required, steady the cervix with a tenaculum while passing the tampon into the uterine cavity. Then throw into the vagina and all over the cervix uteri a powder of iodoform (one-third) and bismuth subnitrate (two thirds). Sometimes he uses boro-glyceride instead of the above. A pessary made of marine lint (which is aseptic) is then introduced.

Dr. I. S. Stone, of Washington, D. C., commended Dr. Wilson's paper for its cautions as to the use of pessary and probe. Various ovarian diseases and peri-uterine inflammatory adhesions are the most frequent causes of chronic retro-displacements; but it is obvious that no pessary can remove such causes. Some patients express themselves as feeling better after the doctor in whom they have confidence does anything looking to their relief. Thus pessaries are often beneficial in the way of favorable mental impression. But when a pessary does not cure in a short time, then remove it and substitute another treatment. He had recently removed a pessary from a lady in whom it was inserted some years previously while she was in Japan. The pessary had most probably excited the growth of the three fibromata which he found attached to the uterine wall.

Dr. R. M. Slaughter, of Theological Seminary, Virginia, reported a case of long wearing of a pessary.

Dr. Wilson closed by emphasizing some of the points he had made.

Dr. H. M. Nash, of Norfolk, Va., presented an admirable review of *Advances in Obstetrics and Diseases of Women and Children*.

Invited guest Dr. Thomas A. Ashby, of Baltimore, presented some personal

OBSERVATIONS ON THE ETIOLOGY AND PATHOLOGY OF THE DISEASES OF THE PUERPERIUM.

In no case of puerperal metritis, peritonitis or septicæmia examined had he failed to find evidence of cervical laceration; the same is true with reference to cases of tubal diseases that had come under his observation. He remarked upon the different morphological characteristics, as well as clinical histories, lesions, etc., produced by the different microörganisms which enter the vagina. The germ of putrefaction produces a distinct sapræmia, while the germ of suppuration develops true septicæmia or pyæmia. Bacteria termo generate ptomaines or leucomaines, which enter the blood and produce putrefaction. On the other hand, micrococci, chain-bacteria or streptococci of wound infection are believed to be identical, as they flourish in the blood and multiply so rapidly as to cause the most profound toxæmia. Thus it will be seen that most of the diseases to which he has referred are preventable by thorough asepsis.

In the paper on

PUERPERAL ECLAMPSIA

by Dr. J. T. Graham, of Wytheville, Va., it was shown from a study of 180 cases that the time honored theory that albuminuria is a cause of puerperal eclampsia is not true in every case. He treated the subject in four divisions. 1. Albuminuria without eclampsia; 2. eclampsia without albuminuria; 3. the conditions of the kid-

neys during pregnancy; 4. the products of intestinal putrefactions. In the first division it was proven from statistics that the majority of cases of albuminuria during pregnancy do not result in convulsions; under the second division it was stated that cases of eclampsia have often been known where no albumin was found in the urine. The theory of obstruction to the free flow of the urine by pressure of the gravid uterus upon the kidneys, their blood vessels and ureters is dwelt on in the third division; but particular attention is called to the fourth division, viz.: *the absorbed soluble products of intestinal putrefactions.* Constipation is the rule in the pregnant woman and putrefaction of the contents of the large bowel is more liable to occur, the products of which are absorbed, more or less, and are poisonous. This is especially dangerous if the kidneys are not active enough to eliminate these poisons from the blood.

The treatment is prophylactic, sedative and eliminative. The first is considered most important. It is suggested that as soon as a woman knows she is pregnant she should be under the care of a physician who should regulate her diet, clothing, exercise, etc., and keep her skin, kidneys, and bowels active. Many physicians are too careless about the examination of the urine of pregnant women. The sedative treatment consists in the use of bromides, chloral hydrate, morphine, chloroform, and veratrum viride. The eliminative treatment consists of diuretics, diaphoretics, hydragogue, cathartics and venesection.

SYMPTOMATOLOGY AND TREATMENT OF CHRONIC FORMS OF NEPHRITIS.

As a summary of the paper by Dr. Wm. C. Dabney, of the University of Virginia on this subject, he itemized the following conclusions:

1. Dropsy is often absent in cases of chronic Bright's disease.

2. The symptoms which, when not clearly due to other causes, should suggest an examination of the urine and cause a suspicion of Bright's disease are: 1. Pallor or a dark color of the skin of the face. 2. Nausea and vomiting. 3. Headache and giddiness, drowsiness, dulness, stupor or convulsions. 4. Disturbances of vision. 5. Paroxysms of difficult breathing.

3. Albuminuria and the presence of casts are not invariable symptoms of chronic Bright's disease, but are often absent in the most serious cases.

4. The amount of solid urine discharged is diminished in all cases.

5. A milk diet and the avoidance of cold and dampness are of the greatest importance in these cases.

6. Digitalis is useful when the flow of urine is scant, and the pulse soft and compressible.

7. Nitro-glycerine is useful when the pulse is full and hard.

8. Nitro-glycerine and digitalis may often be given together with advantage.

CONCUSSION OF THE LUNGS

was the subject of a paper of rare interest by invited guest Dr. B. A. Watson, of Jersey City, N. J. He uses the term "concussion" in precisely the same sense as it is used when speaking of the brain as the seat of the concussion lesions, allowing for differences in the weight and texture of the organs involved. His paper is based on a study of 141 original experiments. He considered his subject under the following subdivisions: 1. An organic disturbance attended with slight pathological lesions, not characterized by any consecutive complications. 2. A severe organic disturbance, attended with severe pathological lesions, characterized by physical and rational symptoms, and commonly followed by consecutive complications which are generally inflammatory. 3. A grave organic disturbance, attended with grave pathological lesions, frequently producing death within a few minutes or a few hours. Indirect concussive force is much more productive of serious lesions in the thoracic, abdominal and pelvic organs than to the brain or spinal cord.

Dr. I. S. Stone, of Washington, D. C., read a paper giving an account of an interesting

MYOMECTOMY FOR PARASITIC TUMOR.

The patient, an unmarried woman of 35 years, had noticed the growth for several months, but was not greatly inconvenienced by its presence. She was somewhat emaciated, had decided albuminuria, and her abdomen gave the appearance of pregnancy at the eighth month. The operation was not particularly difficult, the chief interest lying in the development and attachments of the growth. It had a slender attachment or adhesion to the uterus posterior to the fundus, and this indicated its birthplace. Its diminished nutrition being interfered with at this time, a new base or pedicle was formed on the posterior surface of the right broad ligament. The uterus, tubes and ovaries were quite normal in appearance, and were not disturbed. The pedicle was treated as suggested by Schroeder for hysterectomy, it being too short to fasten in the wound. The patient made an excellent recovery, and continues well.

THE TREATMENT OF GOITRE BY ELECTROLYSIS,

was the title of a paper read by Dr. Chas. M. Shields, of Richmond. In the cases reported he used the *labile* method or application of the electrodes to the surface of the skin without puncture.

One of the cases was of the simple glandular form, three of fibro-cystic. All had been treated before by the usual means such as iodides, blisters, hypodermatic injections, setons, etc., without im-

provement. By the means of electrolysis three were cured and the fourth reduced to one-third its original size. The sittings were from two to six days apart, and from fifteen to thirty Leclanche cells.

Dr. W. H. Baker, of Lynchburg, Va., read an interesting and instructive historical paper, giving *A Glympse of Ancient Egyptian Ophthalmology.*

Dr. Joseph A. White, of Richmond, Va., presented two papers—one on *Mistaken Impressions about so-called Nasal Catarrh*, and one on *Some Suggestions about Cataract Operations.*

Invited guest, Dr. Wharton Sinkler, of Philadelphia, read a paper on *Hereditary Chorea*, and reported three additional cases. He also read the details of an autopsy made in a case previously reported. The result of the examination showed no gross changes in the brain or cord, but microscopic examination of the cord revealed very distinct changes about the central canal and degeneration in the antero-lateral columns.

Dr. William F. Drewry, first assistant, Central Lunatic Asylum, Petersburg, Va., presented a resumé of the progress made within the past year, in

DISEASES OF THE MIND AND NERVOUS SYSTEM.

The literature, during the year, on neurology and psychiatry has been voluminous. Our knowledge of almost every known neurosis has been broadened and made more thorough. Microscopy has accomplished wonderful results. Neurology is in its infancy, so to speak. *Inebriety* is frequently a disease of the nervous system, and if dealt with as such, the results would be far more satisfactory than at present. Heredity has a great influence in causing it, as also many other affections of the nervous system. The treatment, though a difficult problem, should be put into the hands of scientific medical men. It can best be carried out in a well regulated retreat, where suitable employment, exercise, proper medication, etc., could be enforced. Instances of neuroses and psychoses following la grippe had been numerous. Melancholia was frequently a sequel. The author had carefully studied the statistics of general paresis and stated that 3 per cent. of all patients admitted to forty-four insane hospitals in this country in 1890 (representing every section), were cases of general paresis. Males predominated seven to one over females. Negroes very rarely had the disease. In the Eastern, Middle and New England States, the percentage of paretics was 4.2 of all admitted to hospitals during the year named. In the manufacturing districts the paretics constituted about 8 per cent. of cases of insanity. In the Southern States 2.7 per cent. of the insane were paretics. In the Western and Pacific States, 2.1 per cent. No class was exempt from this disease. It was by no means confined to brain workers. The most prolific causes are alcohol, and general mental and physical overwork. Sulphonal as an hypnotic for the insane, was second to chloral hydrate. It had also been employed with success in the quieting of maniacal excitement, controlling spasms, convulsions, etc. It is useful in many nervous troubles.

Dr. T. D. Crothers, of Hartford, Conn., present by invitation, discussed

THE DRINK PROBLEM FROM A MEDICAL POINT OF VIEW.

The hereditary tendencies to the disease of inebriety were forcibly pointed out. To treat the disease, therefore, is to correct the hereditary tendency. Treat everything as dangerous to man and as criminal which perils human health and happiness. Drunkards and drinkers should be considered as dangerous to others in society, and thus absolutely isolated in hospitals, etc. Give them employment and thus make them pay the expenses of their own support. If then such hospitals cannot be self-sustaining, tax the manufacturer and seller of spirits enough to do so.

Dr. J. T. Graham, of Wytheville, Va., in a paper on *What is to be Done With Our Criminal Insane?* advocated that murderers adjudged insane be confined for a period of years. If guilty, the punishment is light enough; if insane, then they should receive the benefit of hospital treatment. To let an insane murderer loose on the community until after a long period of established cure, is dangerous to the unsuspecting.

Mississippi Valley Medical Association.

Seventeenth Annual Meeting, held in St. Louis, Missouri, October 14, 15, and 16, 1891.

FIRST DAY—MORNING SESSION.

The Association convened in the Pickwick Theatre, and was called to order at 10:30 A.M. by Dr. I. N. Love, Chairman of the Committee of Arrangements.

Prayer was offered by Bishop D. S. Tuttle.

The Address of Welcome was delivered by Hon. E. A. Noonan, Mayor of St. Louis, which was followed by brief addresses on the part of the Missouri State Medical Association, by Dr. W. B. Outten; the St. Louis Medical Society, by Dr. Ludwig Bremer, its President, and appropriate remarks by Drs. Harold N. Moyer, and J. C. Culbertson, of Chicago.

After the report of the Chairman of the Committee of Arrangements, which was an interesting and attractive one, Dr. C. H. Hughes, of St. Louis, took the chair and declared the Association ready for the transaction of its scientific work.

The first paper was read by Dr. W. Carroll Chapman, of Louisville, on

THE TOXIC EFFECT OF TOBACCO VAPOR, WITH REPORT OF CASES.

He said that usually the presence of tobacco poison in the systems of tobacco workers is manifested during the first day or two by violent vomiting, retching, purging and often a state of collapse, after which the system may become inured to it. Occasionally we find one whose constitution, even by contact and time, although there is a certain amount of toleration, refuses to receive it kindly, and emaciation begins, attended sooner or later by such symptoms as the following case illustrates:

Case 1.—Willie C., aged 10 years, was found suffering extreme pain in the abdominal region, with the intensity centering at the umbilicus. Temperature, under the tongue, 100°; pulse 108, small, wiry and irregular; respiration 20 to 22, but irregular—several short, shallow respirations followed by one deep and gasping. Tongue glairy, red appearance and pointed. Patient constipated for the last several days; abdomen flat or rather depressed; urine scanty and slightly colored; skin dry, as were the hands and feet, the latter being a little cold. When near the patient the odor of tobacco was so pronounced that the doctor made inquiries regarding it and learned that he worked in a tobacco steamery and further, that he had slight attacks of similar pains at several different times except of a milder form.

As to the nicotianin, indications point strongly to its being a cause. According to Landerer it occurs only in dried tobacco leaves, and has the odor of that plant; a point strongly in its favor, as that odor was so distinct in every case the author had seen. It would seem further, that the basic substances and fatty acids were causative agents, because authors have proven, by physiological experiments, that these cause contraction of the pupil, dyspnœa, abdominal pains, convulsions and death.

The author directs attention to two factors noticeable in all the cases, namely: the emaciation, and the time each one had followed the occupation, that is, from six weeks to three months. The three cases which he reports had not suffered from the vomiting and retching usually attendant upon young tobacco workers the first day or two. In the other, or milder cases, he neglected to enquire regarding that point.

The toxic effects of tobacco vapor and its treatment was a subject worthy of more consideration than the profession has accorded to it in the past, and he hoped that the next few years, aided by diligent and careful investigation, would place the matter in a more intelligent light.

AFTERNOON SESSION.

Dr. Robert C. Kenner, of Louisville, Ky., read a paper on *The Treatment of Typhoid Fever*, in which he directed particular attention to the cold bath treatment.

Dr. William Warren Potter, of Buffalo, followed with a paper entitled

PELVIC INFLAMMATIONS IN WOMEN; A PATHOLOGICAL STUDY.

The author affirmed that pelvic inflammations and their residues constitute about one-third of the diseases that gynecologists treated, hence the importance of frequent discussions of all moot questions relating to the subject. He briefly reviewed the anatomical relations of the pelvic organs, calling attention to their enormous blood and nerve supply, which became both their weakness and their strength.

He contrasted the pathology of Bennet (1843) with that of Emmet (1873), and the latter with the teachings of Price, Tait, Hegar and McMurtry, of the present age. He referred to the pathological studies of Bernutz and Goupil, of thirty years ago, and affirmed that the observations of the present had served to confirm the correctness of those pioneers.

He next asserted that the pathology of to-day had been established by operative surgery, which had shown that pelvic inflammation begins in the tubes or ovaries, and extends to adjacent structures, through absorption or by contiguity; that it almost never begins in the cellular tissues, but may be carried there through the tubes and ovaries by infections, either specific, puerperal or traumatic. He affirmed that the inflammation was in most cases a peritonitis, intra-pelvic or local in character, and not a cellulitis; that para- and perimetritis were misleading and confusing terms, hence should be dropped; and that the so-called pelvic abscess was a sequence of salpingitis, ovaritis or peritonitis, not a primitive accumulation in the areolar tissue itself.

The tentative management in these cases—rest, counter-irritation, hot sitz baths, vaginal douches, and attention to the digestive organs and general health—resulted in only temporary improvement, or in cure in a very small percentage. Those reported cured were generally, if the history could be known, subject to repeated relapses; and a frequently recurring pelvic peritonitis usually indicated leaky tubes. Electricity, too, had disappointed even its most sanguine advocate, and need not be considered.

In conclusion, he asserted that if these views be accepted, the logical deduction was to watch the early manifestations of the disease carefully, that competent surgical skill be invoked before the damage to important structures becomes too great to justify the expectation of successful operation.

Dr. Geo. F. Hulbert, of St. Louis, read a paper on *The Nervous Equation of Pelvic Inflammation*.

Dr. L. T. Riesmeyer, of the same city, con-

tributed a paper entitled *Pathology and Surgical Treatment of the So-called Strumous Inguinal Lymphadenitis.*

SECOND DAY—MORNING SESSION.

The Association was called to order by President Hughes at 10 A.M.

Prayer was offered by Rev. Dr. S. J. Niccols, of St. Louis.

Dr. Rufus B. Hall, of Cincinnati, Ohio, read a paper on *Complications During and Following Abdominal Operations.*

Dr. Arch Dixon, of Henderson, Kentucky, followed with a paper entitled

GASTROSTOMY FOR IMPERMEABLE STRICTURE OF THE CARDIAC END OF THE ŒSOPHAGUS; RECOVERY; SUBSEQUENT DILATATION OF THE STRICTURE.

On July 14, of the present year, Dr. Thomas W. Taylor consulted him in regard to a patient who was unable to swallow anything save liquid. The patient, Captain S., aged 54, weight previous to difficulty in swallowing, 230 pounds, at the time of examination 156 pounds. Examination by means of œsophageal bougie (smallest size) revealed the fact that complete stenosis of the œsophagus existed at the cardiac end. Repeated trials failed to pass the stricture, and the patient was informed that only an operation, the nature of which was explained to him, could prevent his death from starvation. Operation was declined. Again on July 29, the patient consulted him, and after persistent effort he failed to pass the stricture with the smallest bougie. The patient was requested by the author to go before the Henderson County Medical Society, which held a meeting that afternoon, and be examined. To this the patient consented and again an attempt was made to pass the stricture by a number of physicians present, without success. A statement of the case was made by Dr. Dixon, and the unanimous opinion was expressed to the patient that only an operation could save his life. The patient had by this time grown much weaker and was reduced in flesh to 140 pounds. The operation was consented to and on August 4, at the Home Mission Sanitarium, assisted by Drs. John Young Brown, W. M. Hanna, W. S. Stone, A. J. Lieber, and T. W. Taylor, Dr. Dixon did a gastrostomy after Hecker's method, as follows:

The patient was prepared in the usual way, the field of operation being made as nearly aseptic as possible. Chloroform was administered by Dr. T. W. Taylor. The incision was made four inches long, beginning one inch below the ensiform cartilage and an inch and a half to the left of the medium line; the peritoneum was reached, caught up between forceps and divided the full length of the incision. The index and the middle fingers were inserted, the transverse colon pushed downward and the stomach reached without difficulty; a fold was caught between the fingers and partially drawn through the wound, where it was held by Dr. Brown, while a careful search was made for the cardiac end and to detect, if possible, any tumor or enlargement which might be the cause of the stricture; none could be discovered. A silver pin was now passed through the fold of the stomach, which was drawn through the wound, a little above the level of the skin, care being taken that the pin pierced the mucous membrane, as suggested by Weir, thus forming a support for the stomach in the wound and serving as a guide when the opening should be made into it to show that the cavity was reached. The pin was about three inches long and rested on the skin on either side of the wound; the peritoneal coat of the stomach was now stitched to the peritoneum by a continuous suture, which on either side of the wound included the skin. The peritoneum above and below was brought together by interrupted sutures, which embraced muscle, fascia and skin as well.

The wound was now covered with iodoform collodion over which iodoform gauze was placed, confined by adhesive strips. The opening into the stomach was purposely deferred until adhesions should have formed. The patient recovered from the effects of the anæsthetic well. There was some pain of a darting character, which was relieved by hypodermic injection of morphia ¼ gr., and atropia $\frac{1}{150}$. The operation was finished at 11 A.M. At 6 P.M. temperature was 99; pulse 78. August 5th, temperature 98½; pulse 72. Temperature and pulse remained normal until the morning of August 7th, when the dressing was removed.

A few drops of cocaine were injected into the fold of the stomach which protruded through the wound and the gastrostomy was completed by cutting down upon the pin with a tentome. As in Weir's case, the presence of the pin was a valuable guide in showing beyond question that the cavity of the stomach had been entered. There was no hæmorrhage of moment. The adhesions being firm, the pin was withdrawn and the mucous membrane was drawn up and stitched to the skin. A rubber tube was now passed into the stomach through the opening fitting it snugly. Iodoform collodion was liberally used around the tube and over the abdominal wound. Iodoform gauze folded several times, through which a hole was cut for the tube, came next, covered by a piece of rubber sheeting. Borated cotton held in place by adhesive strips completed the dressing. The tube was kept *in situ* by a thread passed through it above and below, and the thread held in place by adhesive strips. Peptonized milk, one-half pint with a teaspoonful of Mos-Quera's beef-meal was now injected through the

tube into the stomach by means of a large syringe. An ordinary spring clothes pin was used as a clamp for the tube. Six hours later another one-half pint of milk with the beef meal was thrown into the stomach, the patient experiencing a satisfaction which had not been experienced previously from the use of nutritive enemas. Temperature at 8 P.M. reached 101°. At 10 A.M., August 8th, it had again fallen to normal. The feeding was continued at intervals of six hours, the food being varied in character; chopped meat, eggs, bread, etc., the patient having an aversion to brandy, and would take no stimulant of any character. Improvement was steady and in ten days the patient was out of bed. In two weeks he was walking about the house, and in three weeks was down in the city, a distance of one-half mile from the Sanitarium.

On the 29th day of August, twenty-four days after the primary operation, and twenty-one days after the stomach was opened, Dr. Dixon determined to try dilatation, and was agreeably surprised to find that the smallest size, olive-pointed bougie entered the stomach, passing the stricture without difficulty; a size larger was now used and it passed also without force.

The following day a large stomach tube was passed down the œsophagus, and with little difficulty entered the stomach. Dilatation was continued at intervals of a few days. From liquid food the patient soon essayed some solid food, and on September 10 took his first square meal, which consisted of oysters, broiled beefsteak, coffee, eggs and bread. The patient left the Sanitarium, and he was thinking seriously of closing the abdominal opening, or allowing it to close. On September 23, the patient, who made daily visits to his office, complained again of difficulty of swallowing solid food; especially was there difficulty in swallowing bread. The bougies passed the stricture easily on entrance, but on withdrawal there was a decided hitch, even the smallest bougie was caught slightly when withdrawn. Dr. Dixon at first attributed this to spasmodic action, but the difficulty grew greater and greater, until finally he could no longer enter the stomach by way of the œsophagus with a bougie. Liquids could still be swallowed, and found their way into the stomach. He now determined to try retrograde dilatation, and on September 30, assisted by Dr. John Young Brown, he succeeded in finding the cardiac end of the œsophagus and entering it with a very small bougie a boula. The opening was about the size of a very small shirt buttonhole, and felt much like the meatus urinarius in a girl; it was surrounded by a hard tissue, feeling much like a fibroid. A uterine sound was next properly bent and, with the finger as a guide, passed into the œsophagus; this was followed by a uterine dilator. Slight pressure on the handles opened the blades almost half an inch, but the patient experienced so much pain that it was deemed best to desist. The following day chloroform was administered and retrograde dilatation was accomplished, first by means of G. Wylie's uterine dilator, the use of which enabled him to enter the orifice with a large-sized bougie (rectal).

Up to this time he had not been able to determine whether the stricture was due to malignant trouble or not, but on passing the finger into the non-dilated œsophagus, a friable, irregular growth was detected, which easily broke down and bled rather freely. A piece of this growth was twisted off by forceps, and was sent to Formad, of Philadelphia, for examination. Since the dilatation the patient has been able to swallow solid food without much difficulty, and has notably improved in flesh and strength, and is able to attend to some business.

The author wished to acknowledge his indebtedness to Dr. Robert F. Weir, of New York, for many valuable suggestions, both in the performance of the operation and in the management of the case afterward, gleaned from his report of a similar case published in the *Medical Record*, July 25, 1891.

Dr. Dixon also exhibited the patient to the Association.

Dr. L. Ch. Boisliniere, of St. Louis, exhibited a new obstetric forceps of his own design.

(*To be concluded.*)

Golden Belt Medical Society of Kansas.

The regular quarterly meeting of the Golden Belt Medical Society of Kansas, was held in Abilene, Kas., October 8, 1891.

DR. WILLIAM B. DEWEES, President, in the chair, called the meeting to order at 4 P.M. After the general order of business was passed over, Dr. Ed. E. Hazlett, of Abilene, Kas., read a paper on

NEUROSIS OF THE EXTREMITIES,

and reported the case of Dr. King, of Abilene, first president of this Society, whom he brought before the meeting for inspection, as a great sufferer from what may be termed "Metatarsal Neuralgia," for want of a better terminology. The President suggested that, there being no objection, Dr. J. C. McClintock, of Topeka, kindly consent to examine the case of Dr. King before this Society. No objection being offered, and Dr. McClintock consenting, about fifteen minutes were devoted to the examination, without eliciting any positive evidence of their being any central cause. Thus confirming the diagnosis of Dr. Hazlett, of its being of local origin. The case proved a very interesting one, more especially from the fact that several months ago, Dr. J. N. Ketchersid, of Hope, Kas., assisted by

Dr. Hazlett, and several others, removed about two inches of the posterior tibial nerve without any permanent relief. The paper and the case were discussed at length by Drs. McClintock, Ward, Ross, Lyman, Austin, Ketchersid, Blesh, Gunn, Felty and Curtis.

The Society now adjourned until 8 P.M. Promptly on time the President called the evening session to order, and Dr. G. A. Wall, of Topeka, read an instructive paper on

BLENORRHITIS MARGINALIS,

which was discussed by Dr. Hazlett opening the discussion, Dr. Wall holding that errors of refraction were much less frequent an exciting cause than text books teach, to which Dr. Hazlett took exception, claiming that in his experience errors of refraction were the most frequent cause.

Dr. J. N. Ketchersid, of Hope, Kansas, read a paper on

MANAGEMENT OF ABORTION,

which brought out quite a flood of discussion, which was opened by Dr. Ward of Topeka, Drs. Lyman, Blesh, Felty, McClintock, Austin, Ross, Gunn, and others.

The subject for general discussion was now taken up, Acute and Chronic Dysentery, opened by Dr. Gunn, of Chapman, Kas. This brought out the experience of every member present, and ipecacuanha, sulphate of magnesia, nux vomica and opium were the chief drugs relied upon. The mode and manner of administration, together with special care of patient, differing somewhat. But cleanliness, rest, air and proper feeding were the chief anchors upon which they relied. By request, Dr. Ward, of Topeka, reported several cases of removal of the uterus and its appendages, successfully, for the relief of suffering incident upon diseased conditions of the same.

The Society adjourned to meet in Salina, Kan., in January. F. B. BROWN, Secretary.

NECROLOGY.

The death of Dr. Thomas A. Rodger, of the Montreal General Hospital, and Chief Medical Officer of the Grand Trunk Railway, is believed to have been the result of pyæmic infection consequent upon his hospital work. In May last, his trouble began as an erysipelatous attack, locating itself upon an apparently slight abrasion. A severe phlegmon of neck and face followed, which led up to a slow pyæmia with suppurating joints, and finally pneumonia. His death, despite the best efforts of the best talent of Montreal, took place after three months of suffering, a premature sacrifice while in the line of duty, at the age of forty-four. He had been president of the Medico-Chirurgical Society, Fellow of McGill University and member of Provincial Medical Board.

EDWARD WILD, M.D.—The death of General Edward Wild, M.D., a graduate of Harvard University and Jefferson Medical College, is reported by telegram to have occurred in South America. His was a remarkably eventful career, in which adventure was more prominent than medicine. When the Crimean war broke out he entered the Turkish army as a surgeon. And about four years after his return home, our own civil conflict occurring, Wild took a commission as Captain in the First Massachusetts, May, 1861. Twelve months later he was chosen Colonel of the 35th, and one year later still he was Brigadier-General, in which capacity he served through the war. Brookline, Mass., was his home, and his membership in the State Medical Society is registered as from that town, in 1850. He was latterly much interested in mining, and it was in part these interests that led him to Medelin, Columbia, where his death took place. He was 67 years old.

DR. JAMES HENRY BENNET, of London and Mentone, died at the latter place, aged seventy-five years. He was formerly physician to the Royal Free Hospital and Western General Dispensary. His "Practical Treatise on Inflammation of the Uterus and its Appendages," reached its fourth edition in 1861, and other publications of his on consumption, hygiene and the health resorts of the Mediterranean were among the most popular of their kind. He was himself a sufferer from pulmonary mischief, and beginning about 1859 spent his winters away from London, generally in the Rivieras.

MISCELLANY.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from October 17, 1891, to October 23, 1891.

Major Peter J. A. Cleary, Surgeon U. S. A., upon being relieved from duty at Mount Vernon Bks., Ala., is ordered to duty at Ft. McPherson, Ga.

Major John C. G. Happersett, Surgeon U. S. A., upon being relieved from duty at Ft. McPherson, Ga., is ordered for duty at Ft. Custer, Mont.

Major Richard S. Vickery, Surgeon U. S. A., is relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark., and ordered to duty at Ft. Monroe, Va. Major Curtis E. Munn, Surgeon U. S. A., upon being relieved from duty at Ft. Monroe, Va., is ordered to duty at Mt. Vernon Bks., Ala.

Capt. Edwin F. Gardner, Asst. Surgeon U. S. A., will proceed from Ft. Porter, N. Y., to New York City, for temporary duty as attending surgeon and examiner of recruits in that city.

Capt. Charles M. Gandy, Asst. Surgeon U. S. A., granted leave of absence for fifteen days, to take effect on final adjournment of Army Medical Board, now in session in New York City.

First Lieut. Benjamin Brooke, Asst. Surgeon, is relieved from duty at Ft. Riley, Kan., and ordered to duty at Ft. Leavenworth, Kan.

First Lieut. Frank R. Keefer, Asst. Surgeon U. S. A., upon being relieved from duty at Ft. Leavenworth, Kan., is ordered for duty at Ft. Riley, Kan.

Major Passmore Middleton, Surgeon U. S. A., will report in person to Col. Melville A. Cochran, Sixth Infantry, President of the Army Retiring Board at Newport Bks., Ky., for examination by the Board. By direction of the President.

Capt. Arthur W. Taylor, Asst. Surgeon U. S. A., will report in person to Col. John Mendenhall, Second Artillery, President of the Army Retiring Board at Ft. Adams, R. I., for examination by the Board. By direction of the President.

Capt. Daniel M. Appel, Asst. Surgeon U. S. A., is granted leave of absence for one month, to take effect about 6th prox.

Major William E. Waters, Surgeon U. S. A., upon being relieved from duty at Ft. Custer, Mont., is ordered for duty at Columbus Bks., O.

First Lieut. Nathan S. Jarvis, Asst. Surgeon U. S. A., is relieved from duty at Ft. Bayard, N. M., and ordered for duty at San Carlos, Ariz.

Capt. Richard W. Johnson, Asst. Surgeon, upon being relieved from duty at San Carlos, Ariz., is ordered for duty at Ft. Bayard, N. M.